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ABSTRACT

The study evaluates the effectiveness of 50 projects administered under Part D of the 1968 amendments to the Vocational Education Act of 1963 (one for each State, except Hawaii, and for the District of Columbia), designed to assist students in obtaining satisfying employment. In all, 4,632 participating and 4,403 nonparticipating students in grades 6, 9, and 12 and 1,433 teachers and 229 counselors were surveyed. Regarding the conformity of student outcomes attributable to project activities, it was found that the greatest impact of Part D programs was at the elementary level, and that, on a project-by-project basis, the program's impact on students was small. Regarding the relationship of cost to student outcomes, it was found that projects had the most positive effects on students where relatively more project funds were expended on relatively fewer students. The study concludes that the failure of student level outcomes of the programs to meet the level planned most likely occurred because of the general lack of clearly defined objectives, definitions, and managerial requirements and procedures at both the project level and the Federal level. The study contains 82 tables and two appendixes (Part D Legislation and a USOE policy statement. (Author/JR)

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FINAL REPORT
ON
"EVALUATION OF
VOCATIONAL EXEMPLARY PROJECTS"

Part D Vocational Education Act
Amendments of 1968

Submitted To:

Office of Planning, Budgeting, and Evaluation
U.S. Office of Education
Department of Health, Education, and Welfare

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U S DEPARTMENT OF HEALTH,
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March 1975

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The work reported herein was performed pursuant to a contract with the United States Department of Health, Education, and Welfare, Office of Education. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the Contractor and do not necessarily reflect the views of the Office of Education.

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Washington, D.C.
March 1975

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EXECUTIVE SUMMARY

Final Report on: Evaluation of Vocational Exemplary Projects; Part D, Vocational Education Act Amendments of 1968

Contractor:

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I. PURPOSE OF THE STUDY

Description of the Program:

Part D of the 1968 amendments to the Vocational Education Act of 1963 provides for the funding of exemplary projects which represent new ways to create a bridge between school and earning a living for young people. Half of the funds appropriated for Part D are administered directly by the federal government through the Division of Vocational and Technical Education (DVTE) in the U.S. Office of Education and half are administered by the states and territories.

Between June 1970 and July 1972, DVTE awarded grants averaging approximately $120,000 a year for three years to institutions in each state and the District of Columbia to administer projects in accordance with a USOE policy paper (AVL V70-1). The policy paper provided that each project would combine in one operational setting all of the following:

1. Provision for broad occupational orientation at the elementary and secondary school levels so as to increase student awareness of the range of options open to them in the world of work.

2. Provision for work experience, cooperative education, and similar programs, making possible a wide variety of offerings in many occupational areas.

3. Provision for students not previously enrolled in vocational programs to receive specific training in job entry skills just prior to the time that they leave the school. (Some of these training programs might be very intensive and of short duration.)

4. Provision for intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling. (Placement might be in a job or in post-secondary occupational training. Placement should be accomplished in cooperation with appropriate employment services, manpower agencies, etc.)

5. Provision for the grantee or contractor to carry the program on with support from regular funding sources after the termination of the federal assistance under Part D of P. L. 90-576. (Federal assistance under Part D cannot exceed three years.)

The projects funded during this period constituted the first round of Part D funding, and are considered by many to be the earliest federally funded efforts to implement on a comprehensive basis the concept of career education. Since 1972, a second round of projects guided by a modified statement of USOE policy has been funded. In FY '76, a new set of grants to support a third round of projects following a new set of policy guidelines is planned.

Reason for the Study:

The primary purpose of the study was to evaluate the effectiveness of the first round of federally administered Part D projects and their components in terms of the extent to which student outcomes attributable to project activities conformed to the legislative intent for Part D funds. This included performance of a cost analysis for each project, with a focus on the relation of cost to student outcomes and project process measures, and an assessment of the influence of projects or their components on other schools and school systems in their states. In addition, a descriptive study and analysis of projects supported by state administered Part D funds, paying particular attention to different state allocation strategies, was to be performed.

The basic rationale for the study was that an evaluation of the first three years of the Part D program would lead to improved implementation of the Part D program during subsequent years and would contribute to the replication of successful program aspects by local school districts. Since the Part D effort was so closely associated with the concept of career education, it was also expected that information might be obtained in the course of the study which would assist in operationalizing the concept of career education at the local level.

Principal Objectives:

The basic thrust of the study was to obtain information which would be of assistance in the continued operation of Part D and related programs, as it was recognized from the outset that an evaluation conducted at the end of the three year-cycle could not address the program's long term goals. Accordingly, the objectives of the study were defined as follows:

1. Evaluation of the effectiveness of federal discretionary (Part D) projects and their components where effectiveness is defined as the extent to which student outcomes attributable to project activities conform to the legislative intent for Part D.

2. Performance of a cost analysis of each federal discretionary project covering the three-year period of Part D funding with focus on the relation of cost to student outcomes and project process measures; and performance of cost analysis for those discretionary projects whose funding has terminated, comparing the period before termination of Part D funding to the period after its termination.

3. Assessment of the influence of projects or their components on other schools and school systems in their states.

4. Performance of a descriptive study and analysis of projects supported from state-administered funds, paying particular attention to their estimated impact; and identification of different state allocation strategies to determine the differential impact of various strategies.

Contractor:

The study was initiated and completed under contract #HEW-OEC-0-73-6663 by Development Associates, Incorporated, Washington, D.C. The effective starting date of the contract was June 19, 1973, and the final report was submitted in March 1975. The field work was performed from February through May 1974.

II. METHODOLOGY

The study approach included review of available documents and onsite visits to 50 projects and State Departments of Education. During the first three-year cycle of Part D funding, 61 federally administered projects were supported in the 50 states and District of Columbia. The 50 projects included in this study were selected to meet the following criteria: First, one project in each state with a first-round project operating in FY '73 was to be visited; as Hawaii had no such project, 49 states and the District of Columbia were visited. Second, each project visited must have proposed to focus activity at the elementary school, junior high school, and senior high school levels. Third, if more than one project met the second criterion, the first project funded was selected.

Within each of the 50 projects selected, the broad design called for administering questionnaires and tests to both participating and non-participating students in grades 6, 9, and four strata in grade 12. These grades were chosen because they represented the terminal years for the differing curricula and objectives generally assigned at the elementary, junior high, and senior high levels; they would thus be expected to be the grades where students had received the maximum impact.

In addition, a random sample of participating teachers and counselors as well as non-participating 6th grade teachers was surveyed. Also, interviews with project directors and other staff were conducted and project records and reports were reviewed.

At the state level, the state director of vocational education or his designee and the director of the state Research Coordinating Unit were interviewed with respect to the federally administered and the state administered Part D projects. All data collection instruments were cleared for use by OMB and assigned No. 51-S740002. A detailed field manual was prepared to assist in the data collection effort and field staff received intensive training prior to beginning the field effort.

Although the number varied according to the size and nature of the projects, a minimum of 5% of the students and faculty were surveyed in each of the 50 projects. In total, 4,632 participating and 4,043 non-participating students were tested; the number of participating teachers surveyed was 1,433, and the number of participating counselors was 229. The data gathered were processed and synthesized using standard statistical techniques. Analysis of student data was performed for each sampling group both on a project-by-project basis and across all projects.

III. FINDINGS AND CONCLUSIONS

Prior to summarizing the findings and drawing such conclusions as they permit, the positive program management actions which USOE has taken on the basis of this study's preliminary findings and other reviews of the experience should be noted. Specifically, concerted efforts have been made to be more specific with respect to the definition of key terms, and the student level outcomes expected. In addition, a major emphasis has been placed on improving the quality and practical utility of individual project evaluations. These USOE actions address the overall study finding that projects were typically not well defined in terms of purpose or clientele and that this lack of clarity may relate to the failure in many projects to identify student outcomes significantly related to project activities. Thus, the efforts at the national level during the last year to be more specific with respect to both program objectives and managerial practices represent explicit attempts to improve the program in the years ahead.

A. Summary of Findings

The intent of the Part D program was to fund projects which would implement activities expected to assist students in obtaining satisfying employment. In essence, the grant awards may be considered as the planned federal fiscal inputs into each project, the local budgets as the projects' planned inputs, and expenditures as the actual inputs. A review of the year-by-year input data revealed that in most projects in no single year did the inputs occur at the level planned. Taking the three years in the aggregate and considering both expenditures and the legislative expectation that funds would be expended over a three-year time period, it was found that in 37 out of the 50 projects visited (74%) the federal dollars expended were below the level planned.

In part, the generally high level of project underexpenditures was attributed to the timing of the federal grant actions and the first year start-up requirements in many projects. Another partial explanation for the underexpenditures may be related to the nature of the expenditure records maintained by project managers. Many project directors did not have expenditure data which permitted them to assess project status in even gross fiscal terms. In addition, in the great majority of cases,they did not have information which related expenditures to any set of project activities.

From the findings it was apparent that on an annual basis, and across the three years of program operations, the extent to which projects carried out the activities specified in the USOE policy paper, * which governed the federally administered projects, varied considerably across the 50 projects. While most projects reported students in most of the USOE required activities at some point during the three years, relatively few (26%) reported having students in all activities.

The findings with respect to project activities may be explained partially by the data reported pertaining to program management. A review of the stated objectives of the 50 projects revealed that in many cases the activities called for by the policy paper were not addressed. In addition, a comparison between stated objectives of projects and activity categories indicated that in many projects the performance of activities could not be related to the stated objectives.

Based on analyses of student responses across all projects, the greatest impact of the Part D program was at the elementary school level. In general, the program appeared to have had less impact on students at the 9th grade level; at the 12th grade level, impact was less than at the 9th for two sampling groups and greater for the other two.

On a project-by-project basis the impact of the program on students was small, with the bulk of favorable outcomes in each student group confined to a small group of projects. These "favorable" projects were somewhat different for each student group. Out of 45 projects where comparisons were made between participating and non-participating 6th graders on six relevant student outcome indicators, there was a difference in favor of participants for three or more indicators in ten projects; the most outstanding project at this level reported differences in favor of participants on five of the six indicators. Of the 42 projects where comparisons were possible at the 9th grade level, one project scored positively on six of the nine relevant indicators, and ten produced positive results with respect to three or more indicators. At the 12th grade level, nine indicators of student outcomes were

*Policy Paper - AVL V70-1.

relevant for each of the four stratum sampled. Students whose participation in the program consisted of having teachers who utilized concepts and/or materials made available through the local projects in their regular teaching program (i.e., infusion of career education concepts into the school curriculum), demonstrated a significant difference from non-participants on six indicators in one project; in five projects such differences were found on two or more indicators. In none of the projects where comparisons were possible for students in the Work Experience, Skill Training, or Guidance and Counseling groups was a significant difference between participants and non-participants found on more than three indicators.

The search for relationships between the outcomes and selected project treatment indicators did not provide a clear set of relationships between activity or treatment indicators and student outcomes. However, the review of responses of non-participating sixth grade teachers suggested that in at least some projects the inability to measure significant differences between participating and non-participating students may relate to non-participating teachers implementing career education concepts in their classrooms.

Another potential explanation is suggested by the relatively clear relationship which was found between project expenditures and student outcomes. With respect to elementary, junior high, and senior high familiarization activities, positive indications of project effects on students occurred where relatively more project funds were expended on relatively fewer students.

In summary, projects typically were found to have addressed four components with respect to the federal activity areas. Virtually all projects had some level of familiarization activities at both the elementary and junior high school levels. Projects generally devoted 26% of their Part D funds to pay for elementary school activities which involved approximately 2,000 students per project. The students participating in elementary activities usually amounted to less than half (46%) of the total elementary school enrollment of the grantee and accounted for over half of the total number of project participants (52%).

Junior high school familiarization activities involved some 47% of the total junior high enrollment of the grantees and averaged 1,400 students per project. The activities at this level involved approximately 34% of the total number of project participants and cost 29% of the Part D funds.

Senior high school activities involved some 650 participants per project and represented approximately 35% of the total high school enrollment of the grantee. High school participants represented approximately 15% of the total number of Part D project participants and high school activities accounted for 44% of the total project costs. At the high school level, the typical project reported participants in familiarization activities and one other activity, either work experience or job entry skill training.

The USOE policy paper governing the first round projects required that grantees make provision for the continuation of project supported activities from "regular" funding sources after Part D support had terminated. In 14 of the projects visited, school personnel indicated that project activities either had or would terminate at the end of the grant period, and in 19 other cases they indicated that activities would be reduced. In eight of the projects, project activities either were continuing after the termination of the grant or definite plans existed for the continuation. In nine cases, activities had actually expanded after Part D funding had ceased.

B. Overall Conclusions

Well over half of the teachers and counselors surveyed in each of the 50 sites visited indicated that in their judgment it was important to include career education in the school curriculum. From this point of view, the first years of the program may be judged to have had a substantial effect. However, in general, neither the federally sponsored activities nor the federally expected student level outcomes of the program occurred at the level planned. While a number of reasons for this are possible, the findings suggest that the most likely are associated with the general lack of a set of clearly defined objectives, definitions, and managerial requirements and procedures at both the project level and at the federal level. More specifically:

- The definition of key terms and concepts was neither precise nor consistent at either the federal or local levels. For example, students were identified as project participants because they were being taught by participating teachers, but what constituted teacher participation varied from attendance at a two-hour career education workshop to ten or more released days per semester for inservice training, curriculum development, and classroom planning. This failure to establish operational definitions and categories contributed to the inability of projects to identify with assurance participants in the programs and to the inability at the federal level to monitor project efforts effectively.

- Budgets and expenditure records typically were based on "line-item" rather than programmatic activity categories. Determination of activity costs was very difficult. This difficulty was primarily a result of the grant application and award process which did not specify costs by activity; only in the aggregate. This was further complicated by no provision for administrative costs, which meant that most projects attempted to prorate such costs and attribute them to treatment activities. It is probable that this contributed to the failure of project directors to analyze expenditure data and of project staff to use budget and expenditure data in the management of projects. In addition, it is probable that this contributed both to underexpenditures and the failure to engage in expected activities.

- Similarly, USOE did not use fiscal data as management indicators. Typically, the federal management staff did not receive or analyze expenditure data. This contributed to the underexpenditure of funds annually and the support of some projects for periods in excess of the three-year funding limit stipulated in the legislation.

- The evidence strongly indicates that exemplary programs require considerable start-up activity and time. Failure to anticipate this adequately appears to have resulted in the inability of projects to meet program expectations.

- Generally, participants in the projects were exposed more to visitors in their classrooms who discussed careers, and went on more field trips to learn about jobs, than non-participants. The data suggest that this quantitative difference in the number of such experiences was not sufficient to produce a measurable impact on students. Rather, it appears that such activities need to be integrated into a well-planned and comprehensive effort.

- The number of different approaches to building a bridge between school and earning a living undertaken by the first round projects was limited. Fewer than half of the projects had work experience or skill training activities. Many of the new approaches suggested in the legislation and Federal Register, such as exchanges of personnel between schools and agencies or businesses, were not attempted during the first round. Projects generally did little to promote cooperation between public education and manpower agencies.

- The primary focus of round one was elementary and secondary familiarization and orientation. Most of the total funds and most of the student participants were engaged in such activities. Work experience and skill training efforts tended to be expensive and involve limited numbers of students. Where other activities were initiated, such as alternative high schools, they tended to be less integrated into the school system, expensive, and by design, served fewer students (i.e., potential dropouts or others with special needs).

- To assist college and non-college bound students in obtaining employment, the USOE policy paper indicated that projects should provide specific training in job entry skills to students not previously enrolled in vocational programs just prior to the time that they leave school. The data appear to indicate that most projects extended such training only to the non-college bound.

- The projects typically did not assist students in securing employment, either during school or upon graduation. Generally, the placement activities implemented were essentially referral services and little or no followup was provided. In general, neither project staff nor school personnel maintained records of referrals or placement activities.

- The student responses indicate that guidance and counseling at the high school level was viewed by students as helpful to them. The data also indicate that a great many students did not feel they had sufficient opportunity to receive assistance from their counselors and they would have liked to have increased their contacts.

The Federal Register indicated that applications for round one projects would be judged in part upon the projects' objectives being "sharply defined, clearly stated, capable of being attained by the proposed procedures, and capable of being measured." During the first years of Part D, neither at the federal level nor in most school districts was this the case. The inability to define clearly federal program objectives undoubtedly contributed to many of the difficulties discussed in this study. Without a specified set of federal expectations the individual third party evaluations could only relate to local project goals and objectives. This resulted in a large diversity of evaluation approaches. It is not surprising, therefore, that these evaluations did not provide meaningful or useful management information at the federal level for comparing projects. Without specific criteria for judging project progress, the USOE really had no basis for making annual or mid-project grant modifications. Most importantly, without such predetermined criteria, the USOE had little indication of what criteria would be employed in the final evaluation and so were not able to manage effectively for success.

A final point in this regard relates to the whole area of the management of educational projects. While this was not a management practices study, many of the findings and conclusions appear to relate directly to management issues. The points raised above pertaining to advanced planning, the clarity of program and project objectives, and the use of fiscal data are management questions which relate to attainment of student level outcomes. So too, we suspect, are the points made in the text pertaining to the inappropriateness of the job descriptions of project staff, failure to maintain records pertaining to placement and other project activities, and the limited focus and use of third party evaluations. Based on our observations, project staff typically were sincere, hard working, and oriented toward the substantive aspects of the program. Typically, however, they were not well versed in the use of sound management practices as an aid in bringing about desired innovations in their school districts. Thus, based on the experience of the first round projects studied, it appears that a USOE focus on providing guidance and assistance in the area of project management would have been of major benefit to the successful implementation of exemplary programs.

Such conclusions as these are not uncommon in national studies. While they are accurate, they are also somewhat misleading, for they cannot and do not cover the pre-program context of the system of federal funding. Legislative intent is frequently less than clear, the time constraints do not usually permit careful planning at the federal level prior to funding of local projects; the federal agencies are frequently not sufficiently staffed to permit effective management and, when they are, the desirability of effective federal management of local educational programs becomes a question. Thus, as long as inherent weaknesses such as these persist, evaluation findings will essentially tend to be either negative or ambiguous and recommendations will be symptomatic instead of definitive.

In conclusion, the USOE and especially the program staff in DVTE, who have from the outset not only cooperated with this study but also have taken actions based on preliminary findings, should be commended. It is rare for a national program with innovative and ambitious objectives to engage in a comprehensive, impact-oriented evaluation after only three years of operation. While some of the findings of the study may not be what one might have wished, given the complexities inherent in implementing the Part D program during its initial years, they ought not to be surprising. In our judgment, perhaps the most significant aspect of the study is the inference which may be drawn from the fact that it was done, and that actions have been taken as a result. Clearly, USOE, and the staff of DVTE in particular, have evidenced a commitment to improving both the content and the management of federal education programs.

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1. A separate volume containing narrative descriptions of each project visited is available through ERIC.

2. Due to their number and length, copies of the data collection instruments are not included in this volume. They are on file with USOE.

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CHAPTER I: INTRODUCTION

Part D of the 1968 amendments to the Vocational Education Act of 1963 provided for the funding of exemplary projects at elementary and secondary school levels in each state and territory. As specified in the legislation, half of the funds for the Part D program were to be administered directly by the federal government and half to be administered by the states and territories. At the end of the first three year funding cycle of the program, it was determined that an evaluative study of the first years of program operations should be conducted. This report presents the findings and conclusions of that study.

As outlined by the U.S. Office of Education, the first issue to be addressed in the evaluation was the effectiveness of the federally sponsored Part D projects. Effectiveness was to be measured by "the degree to which student outcomes attributable to project activities conform to the legislative intent for the Part D funds." By virtue of this criterion for assessing program effectiveness, considerable emphasis in the chapters which follow is placed on the background of the Part D program and the conceptual framework which governed both the design of the study and this report.

Throughout the process of designing and implementing this assessment of the first three years of the Part D program, close attention was paid to the legislation and to the issue of attribution of outcomes to Part D efforts. At the outset, an agreement was made between the study team and the relevant offices within the U.S. Office of Education that activities undertaken at the local level which could not be related to legislatively based categories of program activity would be excluded from consideration. It was also concluded that even though the USOE policy guidance given to Part D projects * did not address certain of the legislative activities, data with regard to all of the legislative activities and their associated results would be obtained. Finally, it was agreed that since the clear intent of Congress was to provide support for activities which would produce student outcomes, every effort would be made to assess the level of student impact of project activities, although effort was also directed at teachers and other school personnel.

These crucial decisions made at the start of the study were basic to the overall study design and hence to the findings which are presented in this report. As a basis for interpreting the findings which follow, it should be understood clearly at the outset that each of these decisions not only contributed significantly to the nature of the findings of the study but also were somewhat bold. It was clearly understood by the line administrators of the Part D program that this design coupled with what they knew, or suspected, about the exemplary projects at the local level would produce results which some would view as quite critical of the overall effort. Equally clear from the outset, however, was the even more basic decision on the part of the program administrators that they desired as clear and accurate an assessment of the first round efforts as possible.

It should be noted at this point that the Part D program was established to permit the implementation of concepts and approaches which, while supported by theory and research, were on the frontiers of vocational education. As implemented under the direction of the small program staff of USOE's Division of Vocational and Technical Education, the federally administered projects focused on concepts which over the next several years came to be associated with the term "Career Education." The first set of Part D projects, which are the subject of this study, are considered by many to be the earliest federally supported efforts to implement on a comprehensive basis career education programs in local school districts. With the

* USOE Policy Paper AVL V70-1, October 2, 1969. A different policy paper, AVTE-V72-10, August 28, 1972, has guided the operation of projects funded since that date.

termination of these initial projects, a second group of projects was funded under a modified set of program guidelines which more explicitly focused on what by then were considered career education objectives. As this study began, a third set of projects with a focus which reflects the insights gained from the earlier efforts plus the increasingly wide acceptance of career education were being planned. Thus, at the time this study was being planned, it was apparent that the program would continue, that the basic concepts associated with Part D and career education in general were most favorably received by a wide audience, and that in the long run much was to be gained by an assessment of the first years of the exemplary efforts in terms that would contribute to improved program and policy decisions in the future.

It was within this general context that the study was designed and implemented. As a result, the purpose of this report is not primarily to present a detailed picture of the achievements of a set of projects which have now terminated, which by statutory limitation are ineligible for further federal funding, and whose sister projects in the "second round" of Part D funding are guided by a different USOE policy paper. Nor is the primary intent to offer definitive conclusions with respect to the manner in which this particular educational program was administered during its most formative years. While to some extent this report does both of these, its more important purpose is to assist in the further development and implementation of Part D and related educational efforts.

Finally, before proceeding to the body of the report it must be stressed that this study took place after the first round programs had been in operation for at least three years. In many cases, formal funding had ceased and key personnel were no longer in the school districts at the time of the visits. In addition, as they were charged to do, many of the projects had been highly successful in stimulating the implementation of career education concepts in other school systems. Indeed, from our visits to 50 projects and our contact with federal staff, it was readily apparent that all associated with the program were sincerely dedicated and hard working. Nevertheless, the combined effect of the absence of key personnel, the absence of baseline information with respect both to the student outcome indicators selected and the activities in force in schools visited when they first received Part D funds, and finally, of project success in dissemination of materials and approaches is undoubtedly reflected in the absence of differences between participants and non-participants in some of the study outcome findings. The findings and conclusions presented in the chapters which follow should point toward procedures and policies which will improve the implementation of Part D and career education efforts in the future. In this regard, it should be noted that appropriate USOE offices have already taken significant actions to overcome these problems. In a very real sense, then, this report should be viewed as part of an ongoing process to develop career education in the nation's schools.

CHAPTER II: BACKGROUND

In June of 1973, the first of the federal discretionary Part D projects were terminating their third and final year of operation. These projects constituted the earliest efforts funded under Part D, Section 142(c) of the Vocational Education Act of 1963, as amended, and were part of the first round of Part D funding. The projects were among the initial federally supported efforts in career education and have been considered as in the vanguard of the career education movement. The purpose of this section is to discuss briefly the series of events which led to their funding, the high points of their first years of operation, and to sketch what transpired from the national perspective the following year with respect to this study. It provides the historical background and objectives for the detailed analysis of these projects which is the subject of this report.

A. Part D: Historical Overview

Part D of the Vocational Education Act was a direct result of recommendations from a special Advisory Council on Vocational Education appointed by the Secretary of Health, Education, and Welfare in November 1966. The Council was chaired by Martin Essex, state superintendent of public instruction in Ohio, and included members from business, labor, local school districts, universities, and private foundations concerned with vocational education and manpower development. 1/

Paying particular attention to innovations and new directions emerging from research and development, the Council conducted a detailed study of the status of vocational education in the United States. The Council completed its work in December 1967, and published its General Report containing legislative and administrative recommendations the following year. The Council's recommendations were based on five operational principles for vocational education:

1. Vocational education cannot be meaningfully limited to the skills necessary for a particular occupation. It is more appropriately defined as all of those aspects of educational experience which help a person to discover his talents, to relate them to the world of work, to choose an occupation, and to refine his talents and use them successfully in employment. In fact, orientation and assistance in vocational choice may often be more valid determinants of employment success, and therefore more profitable use of educational funds, than specific skills training.

2. ....Where complex instructions and sophisticated decisions mark the boundary between the realm of man and the role of the machine, there is no longer room for any dichotomy between intellectual competence and manipulative skills and, therefore, between academic and vocational education.

3. ....Education cannot shed its responsibilities to the student (and to society in his behalf) just because he has chosen to reject the system or because it has handed him a diploma. In a world where the distance between the experiences of childhood, adolescence, and adulthood and between school and work continually widens, the school must reach forward to assist the student across the gaps just as labor market institutions must reach back to assist in the transition....

4. Some type of formal occupational preparation must be a part of every educational experience.... In addition, given the rapidity of change and the competition from generally rising educational attainment, upgrading and remedial education opportunities are a continual necessity.

5. The objective of vocational education should be the development of the individual, not the needs of the labor market.... The system for occupational preparation should supply a salable skill at any terminal point chosen by the individual, yet no doors should be closed to future progress and development.[2/]

Building on these principles, the Council recommended a "unified system of vocational education" which included the following as key components:

1. Occupational preparation should begin in the elementary schools with a realistic picture of the world of work. Its fundamental purposes should be to familiarize the student with his world and to provide him the intellectual tools and rational habits of thought to play a satisfying role in it.

2. In junior high school, economic orientation and occupational preparation should reach a more sophisticated stage with study by all students of the economic and industrial system by which goods and services are produced and distributed. The objectives should be exposure to the full range of occupational choices which will be available at a later point and full knowledge of the relative advantages and the requirements of each.

3. Occupational preparation should become more specific in the high school, though preparation should not be limited to a specific occupation. Given the uncertainties of a changing economy and the limited experiences upon which vocational choices must be made, instruction should not be overly narrow but should be built around significant families of occupations or industries which promise expanding opportunities.... All students outside the college preparatory curriculum should acquire an entry-level job skill, but they should also be prepared for post-high school vocational and technical education. Even those in the college preparatory curriculum might profit from the techniques of learning by doing. On the other hand, care should be taken that pursuit of a vocationally oriented curriculum in the high school does not block the upward progress of the competent student who later decides to pursue a college degree.

4. Occupational education should be based on a spiral curriculum which treats concepts at higher and higher levels of complexity as the student moves through the program. Vocational preparation should be used to make general education concrete and understandable; general education should point up the vocational implications of all education. Curriculum materials should be prepared for both general and vocational education to emphasize these relationships.

5. Beyond initial preparation for employment, many, out of choice or necessity, will want to bolster an upward occupational climb with part-time, and sometimes full-time, courses and programs as adults. These should be available as part of the regular public school system. They should not be limited to a few high-demand and low-cost trades, but should provide a range or occupational choice as wide as those available to students preparing for initial entry.

6. Occupational preparation need not and should not be limited to the classroom, to the school shop, or to the laboratory. Many arguments favor training on the job. Expensive equipment need not be duplicated. Familiarization with the environment and discipline of the workplace are important parts of occupational preparation yet are hard to simulate in a classroom. Supervisors and other employees can double as instructors. And the trainee learns by earning. On the other hand, the employer and his supervisors may be more production than training oriented. The operations and

equipment of a particular employer may cover only part of a needed range of skills, necessitating transfer among employers for adequate training. The ideal is to meld the advantages of institutional and on-the-job training in formal cooperative work-study programs.

7. Effective occupational preparation is impossible if the school feels that its obligation ends when the student graduates. The school, therefore, must work with employers to build a bridge between school and work. Placing the student on a job and following up his successes and failures provide the best possible information to the school on its own strengths and weaknesses.[3/]

More directly relevant to Part D, the Council's third legislative recommendation was that "funds and permanent authority be provided for the Commissioner of Education to make grants and contracts to state boards and with the approval of the state board to local educational agencies and to other public or nonprofit private agencies, organizations, or institutions for planning, development, and operation of exemplary and innovative programs of occupational preparation."[4/]

The Council noted that "the effectiveness of a number of new methods, techniques, and services has been verified in research and experimental studies" and that it is necessary to incorporate these new methods and services as they become available "in order to ensure that all youth and adults, especially those with disadvantages, have adequate and appropriate opportunities to prepare for satisfactory employment...." The Council then specified that "these exemplary programs of occupational education should include the following provisions which are not offered widely in existing vocational education programs:

> Exploratory occupational education to provide practical and educational experiences essential to understanding the demands and complexities of our modern society and opportunities in the constantly changing world of work;
>
> Programs designed to acquaint students with employment opportunities and to teach skill and knowledge required in one or more industries or families of occupations certified by the U.S. Department of Labor as offering expanding opportunities for employment;
>
> Programs or projects to provide students with educational experience through part-time work which will assist in their maximum development and which will help link school and employment;
>
> Guidance and counseling to assure that all students' interests and capabilities are developed in relation to their career objectives and to ease the transition from school to work by assisting them in initial job placement;
>
> Improvement of curricula to stimulate broad-scale innovative changes to provide more realistic vocational education programs for youth and adults at all skill levels.[5/]

In essence, the Advisory Council's Legislative Recommendation No. 3 was the basis for Part D of the Vocational Education Amendments of 1968.[6/] The expressed goal of Part D is "to reduce the continuing seriously high level of youth unemployment by developing means for giving the same attention as is now given to the college preparation needs of those young persons who go to college, to the job preparation needs of the two out of three young persons who end their education at or before completion of the secondary level...." Based on this goal,

bridge between school and earning a living for young people, who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies." 7/

In order to build the bridge between school and earning a living and to promote cooperation between public education and manpower agencies, the legislation provided funds to be used to "carry out the development, establishment, and operation of exemplary and innovative occupational education programs or projects designed to serve as models for use in vocational education programs." 8/ The funds allocated to Part D were to be distributed among the fifty states and the District of Columbia according to a formula specified in the Act with up to 3% of the total allocated to be distributed among Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territories of the Pacific Islands according to their respective needs for assistance. Of the amount available to each state, 50% was to be administered by the state and 50% was to be administered by the U.S. Commissioner of Education.

For both the state and the federally administered portions of Part D, the legislation specifies that grants or contracts may be made to pay all or part of the cost of planning, establishing, operating, or evaluating exemplary programs or projects designed to carry out the two main purposes of the Act and "to broaden occupational aspirations and opportunities for youths, with special emphasis given to youths who have academic, socioeconomic, or other handicaps, which programs or projects may among others, include --

(A) those designed to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required and the requisites for careers in such occupations;

(B) programs or projects for students providing educational experiences through work during the school year or in the summer;

(C) programs or projects for intensive occupational guidance and counseling during the last years of school and for initial job placement;

(D) programs or projects designed to broaden or improve vocational education curricula;

(E) exchanges of personnel between schools and other agencies, institutions, or organizations participating in activities to achieve the purposes of this part, including manpower agencies and industry;

(F) programs or projects for young workers released from their jobs on a part-time basis for the purpose of increasing their educational attainment; and,

(G) programs or projects at the secondary level to motivate and provide preprofessional preparation for potential teachers for vocational education." 9/

With the passage of the legislation in October 1968, operational responsibility for Part D was given to the Division of Vocational and Technical Education in the U.S. Office of Education's Bureau of Adult, Vocational, and Library Programs. In

preparation for implementing Part D and related amendments, USOE sponsored a conference in Atlanta in March 1969, at which a number of papers pertaining to implementing aspects of the legislative program were presented. Among those presented were: "Unifying an Entire System of Education Around a Career Development Theme," by Edwin Herr, and "Elements of a Model for Promoting Career Development in Elementary and Junior High Schools," by Norman Gysbers.[10/] The titles of these papers suggest the direct link which exists between the origins of the Part D effort and what several years later came to be called "career education."

In October 1969, the U.S. Office of Education invited interested school districts and other organizations throughout the country to submit proposals to conduct Part D projects. More than 175 proposals were submitted to USOE in response to this invitation.[11/] Based on a review conducted in accordance with provisions cited in the Federal Register,[12/] USOE selected one project in each state to receive Part D funds for a period of three years. The review process included provision for states to comment on and veto proposals from organizations in their states. The review was sufficiently stringent that in some states all of the initially submitted proposals were rejected and allocation of funds postponed until a proposal meeting USOE criteria was received. As a result of the review procedures as well as variations in the time taken to respond to the invitation for proposals, the initial Part D projects did not all start at the same time.

The legislation provides that a project is not to receive Part D funds for more than three years and the USOE invitation for proposals specified that projects would be three years in duration. Since it was anticipated from the start that once the first project in a state was terminated another would be funded, the initial projects are commonly referred to as those funded in the "First Round." In June of 1973, the first of the Second Round projects were funded by USOE utilizing criteria and insights gained during the first three years of operation, and by August of 1974, 47 Round II projects had been funded.

In total, 66 projects were funded by USOE in the first round in each of the 50 states, the District of Columbia, and the territories. For various site-specific reasons, three* of the earliest funded projects were terminated significantly prior to their expected three year duration. In two of these cases, another project in the state was awarded funds for a three-year effort and was considered a part of the first round effort.[13/] In seven cases it was determined that the recipient of the initial grant would not need all of the funds available through the legislative allocation formula and subsequently a second, and in the case of California a third, project was funded and considered part of the "first round." Table 1 on the following page presents the starting dates for the first funded project in each state in the first column and in the second column the starting date for subsequent projects which are considered as first round undertakings by virtue of receiving funds prior to January 1973.

As will become clear in subsequent chapters of this report, there was considerable diversity among the first round projects in terms of administrative structure, specific project objectives, and operating style. USOE awarded grants in some cases to state boards of education to encompass several school districts and in other cases to single school districts to focus on a specific portion of the school district. In every case, however, the grants were made in response to proposals judged consistent with a policy paper (AVL V70-1) which constituted a portion of the invitation for proposals.

* Hawaii, Minnesota, and Florida.

TABLE I

FIRST ROUND COMMISSIONER'S SHARE PART D(c) PROJECTS BY MONTH OF ORIGINAL FUNDING

Year:	1970							1971				
Month:	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	June	
First Funded Projects	Ala. Ark. Fla. Ga. Hawaii Ken. La. Mass. Mich. Nev. New Hamp. N.J. N.C. N. Dak. Ore. S.C. Tenn. Va. D.C. Miss.	Kan. Md. Utah	Calif. Okla. Tex. Wyo.	S. Dak. Ohio	Conn. Del. Iowa Me. Minn.	Mont.	Wash.	Colo. Ind. Mo. W. Va.	N. Mex. N.Y. Penn. Wisc.	R.I. Vt.	Alas. Ariz. Idaho Ill. Neb.	
No. Projects	20	3	4	2	5	1	1	4	4	2	5	= 51

Year/Month:	June '71	Sept. '71	March '72	June '72	July '72	
Subsequently funded projects	Minnesota	Florida	Illinois N. Hamp.	California California New Jersey New York	Massachusetts Michigan	
No. Projects	1	1	2	4	1	= 10

SOURCE: **Abstracts of Exemplary Projects in Vocational Education; USHEW. June 1973.**

This policy paper served as a primary reference point for both the funded projects and USOE during the first round. While the projects varied in many respects, all were expected to comply with administrative and programmatic points made in this key document. From a programmatic point of view, the paper specified that: "In order to achieve maximum impact, the funds available for fiscal year 1970 will be focused on programs or projects which combine, in one operational setting, all the following aspects:

1. Provision for broad occupational orientation at the elementary and secondary school levels so as to increase student awareness of the range of options open to them in the world of work.

2. Provision for work experience, cooperative education, and similar programs, making possible a wide variety of offerings in many occupational areas.

3. Provision for students not previously enrolled in vocational programs to receive specific training in job entry skills just prior to the time that they leave the school. (Some of these training programs might be very intensive and of short duration.)

4. Provision for intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling. (Placement might be in a job or in postsecondary occupational training. Placement should be accomplished in cooperation with appropriate employment services, manpower agencies, etc.)

5. Provision for the grantee or contractor to carry the program on with support from regular funding sources after the termination of the Federal assistance under Part D of P.L. 90-576. (Federal assistance under Part D cannot exceed three years.)

While this section of the policy paper concludes by anticipating "that other program emphases may be highlighted in future fiscal years," the focus for all first round projects was to be as stated. Based on three years of experience, a somewhat modified policy statement currently serves as a basic document for second round projects.

Concurrent with the selection by USOE of sites for the implementation of projects funded from the 50% of Part D funds reserved for the U.S. Commissioner of Education, the states awarded grants with their half of the Part D funds. In their use of Part D funds the states were bound by the federal legislation as to procedures and purpose but not by the USOE policy paper and its designation of areas of priority. As a result, the variation in the use of funds both within and between states between 1969 and 1973 was considerable. For example, while some states adopted basically the same funding strategy as did USOE, providing a few projects relatively large amounts of money for a three year period, others funded a great many projects for a short duration. By the same token, there was considerable variation among states with respect to the specific types of legislatively authorized activities which they supported.

In summary, while there was considerable variation among both state administered and federally administered Part D projects during the years between the passage of the legislation in late 1968 and the end of the first three year funding cycle in June 1973, there were several key areas of commonality. The entire effort began from the Advisory Council on Vocational Education which in turn was based on a comprehensive assessment of the status of vocational education in the U.S., and the research and development efforts which were of note at the time. The Part D legislation specified a general goal, two basic purposes, and a set of broad procedures which were presumed to lead to accomplishing the purposes. The responsibility for implementing the procedures, i.e., developing the specific techniques which would in combination accomplish the legislative purpose, was explicitly delegated to USOE and the states presumably with the expectation that variations would occur. These variations, however, were to be within the programmatic and procedural framework specified in the Act.

B. Career Education: Its Relation to Part D

The origins of the concept of career education may be traced back several decades. As a phrase with special meaning to the educational community, it is generally accepted that its origin is the speech by then U.S. Commissioner of Education, Sidney Marland, Jr., delivered in January 1971, at the Convention of National Association of Secondary School Principals, entitled "Career Education Now." In the months which followed, Marland made a series of speeches relating to career education and expanding on various aspects of the concept.[14/] The positive response to his efforts was widespread. Career education became a major thrust of the USOE during his tenure as Commissioner and eventually merited legislation creating within USOE an Office of Career Education. The functions of the Office of Career Education include "providing for the demonstration of the best of the current career education programs and practices by the development and testing of exemplary programs and practices.... and developing State and local plans for implementing career education programs...." [15/]

As Marland used it and as carried forward in the 1974 amendments to the Elementary and Secondary Education Act which established an Office of Career Education, the term refers to a set of concepts which have "been discussed by leaders and scholars in vocational and other education for years." [16/] In tracing the development of career education as an educational program, leading advocates both within the Office of Education and without [17/] cite the major contribution made by the Advisory Council on Vocational Education of pulling together related research and setting forth specific recommendations. Given that it was not until 1971 that the term

"career education" was popularized, there is no inconsistency in the conclusion that while the Part D legislation and policy statements made no mention of it, the projects funded under this section of the Vocational Education Act constitute some of the earliest efforts to operationalize the set of concepts which are now associated with career education.

While the Part D programs which are the subject of this study may accurately be considered career education programs, it must be noted that they by no means constitute all the federal and local effort over the past several years. With the urging of then Commissioner Marland, a great deal of activity was undertaken. The National Institute of Education provided relatively large amounts of funds to test four career education models in selected locations. Several states have made major commitments of time and funds to implement career education programs and several local school districts have invested large amounts of their own resources in implementation. For its part, the U.S. Office of Education has made significant investments in developing career education curricula and in support of career education research projects other than those associated with Part D.

In summary, while the Part D projects and career education have common origins and share many educational concepts and goals, it would not be accurate to presume that the first round effort of Part D constitutes a fiar test of implementing the career education concept. Rather, the first round projects, particularly those supported from the Commissioner's share of the Part D appropriation, should be seen as an early approach to operationalizing the concept in the local school systems, but only one of several such efforts.

C. Evaluation of Part D Projects: Study Objectives

As the completion of the first round three-year funding cycle for Commissioner's share projects drew to a close, the Office of Education determined that a thorough evaluation of the first round effort should be undertaken. While it was recognized that an evaluation conducted at the end of the three year cycle could not directly address the long term objectives of the Part D efforts, it was presumed that much information which would be of assistance in the continued operation of the program could be obtained.

More specifically, it was expected that an evaluation of the Part D program would lead to improved implementation of the effort during the second round of funding and would contribute to the replication of successful processes by local school districts. Since the Part D effort was so closely associated with the concept of career education, it was also expected that information might be obtained in the course of the evaluation which would assist in operationalizing the concept at the local level.

Within the U.S. Office of Education the formal responsibility for evaluating Part D is that of the Office of Planning, Budgeting, and Evaluation. In the spring of 1973, OPBE prepared a statement of work for the Part D evaluation which specified the four following objectives:

1. Evaluation of the effectiveness of Federal discretionary (Part D) projects and their components where effectiveness is defined as the extent to which student outcomes attributable to project activities conform to the legislative intent for Part D funds.

2. Performance of a cost analysis of each Federal discretionary project covering the three-year period of Part D funding with focus on the relation of cost to student outcomes and project process measures; and performance of cost analysis for those discretionary projects whose funding has terminated, comparing the period before termination of Part D funding and the period after its termination.

3. Assessment of the influence of projects or their components on other schools and school systems in their states, and isolation of feasibility of replication and determination of the applicability of project characteristics in other settings.*

4. Performance of a descriptive study and analysis of projects supported from state-administered funds, paying particular attention to their estimated impact; identification of different state allocation strategies to determine the differential impact of various strategies.

In June 1973, OPBE signed a contract to have performed the work necessary to accomplish these objectives and work was begun in July. The work was to be accomplished in two phases.

The first phase of the effort was an "assessment of information available in annual and final reports of each discretionary project in the first three-year cycle, on file in USOE, Washington, D.C., and discussions with USOE program managers."[18/] Among the purposes of this effort was to obtain the data base necessary to develop the design and instrumentation for the field data collection and analysis phase of the evaluation. Implicit in the approach to the evaluation was the assumption that basic descriptive data on most, if not all, projects was available through the project annual reports and the externally conducted evaluations required annually of each project.

Based on the extensive review of materials available regarding state and federal projects and an analysis of third party evaluations, it was apparent at the end of the first several months that uniform data on the projects did not exist. Similarly, it was apparent that where evaluations addressed the area of project impact on participating students the data produced was not amenable to cross-site comparison. There was little uniformity in the indicators selected by the projects with regard to achievement of the program objectives specified in the Part D legislation and related USOE policy.

Given the diversity of the projects with regard to specific student-related outcomes as well as the expected diversity in program processes, the decision was made by USOE and the contractor to develop a set of student outcome and program process hypotheses which were tied logically to the legislation and Part D policy statements. These hypotheses are presented in the context of the next chapter.

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* Based upon an initial analysis of data during the design phase of the study, it was determined that an extensive effort in this regard was not feasible owing to the constraints of time, resources, and available data. The contract was amended accordingly.

FOOTNOTES: CHAPTER II

1. High, Sidney. "A National Perspective on Career Education." Journal of Research and Development in Education. vol. 7, No. 3. Spring 1974. p. 12.

2. Evans, R., Mangum, G., and Pragan, O. Education for Employment: The Background and Potential of the Vocational Education Amendments of 1963. Ann Arbor, Mich., University of Michigan, Institute of Labor and Industrial Relations. 1969. pp. 63-64.

3. Ibid., pp. 65-68 (cited in Hoyt, K., Evans, R., Mackin, E., and Mangum, G. Career Education: What it is and How to do it. Salt Lake City, Utah. Olympus Publishing Company. 1972. pp. 92-94.)

4. Advisory Council on Vocational Education. Vocational Education: The Bridge Between Man and His Work: General Report. Washington, D.C. Government Printing Office. 1968. p. 197.

5. Ibid., p. 198.

6. High, S. op cit. p. 13.

7. Pub. Law 90-576. Part D. Sec. 141. October 16, 1968.

8. Ibid. Sec. 142(d); essentially the same language is used for Sec. 142(c).

9. Ibid. Sec. 143.

10. High, S. op cit. p. 13.

11. Ibid. p. 13.

12. Federal Register, U.S. Government Printing Office. vol. 35 #143. Par. 103.25.

13. The first Minnesota project terminated in September 1971; the second project, "Exemplary Vocational Education Program Based on Environmental Studies (K-14)," was funded in June 1971. The first Florida project terminated in June 1971; the second project, "A Comprehensive Vocational Education Program for Career Development in Grades K-12," was funded in September 1971. The first Hawaii project was terminated in August 1972 and the subsequent project in Hawaii was considered a part of the second round.

14. High, S. op cit. p. 3.

15. Congress of the United States. Education Amendments of 1974. Sec. 406.

16. Hoyt, Evans, Mackin, and Mangum. op cit. p. 8.

17. Ibid. Chapter 3 by Mangum; High, S. op cit. p. 11.

18. USDHEW, Office of Education, Office of Planning, Budgeting, and Evaluation Work Statement; Evaluation of Vocational Exemplary Projects (Part D, Vocational Education Act). Spring 1973. p. 3.

CHAPTER III: EVALUATION FRAMEWORK

The purpose of this chapter is to provide the conceptual framework for the study of the federally administered portion of the Part D program (Sec. 142(c)). The relationship between federal activities and objectives to local activities and objectives is discussed. Four basic program elements and three relationships or processes are identified and the study questions associated with them are presented. Discussion of the approach to the study of state administered Part D programs (Sec. 142(d)) is presented in Chapter XI, together with related findings.

A. Overview

The complete process of evaluating a program such as Part D requires the performance of several activities including the statement of program goals, the measurement of the extent to which the goals were achieved, and finally, comparing achievements to goals and making a judgment on goal achievement. In a very real sense, it is this last step, making a judgment on goal achievement, which is evaluation. The object of this study was to measure program achievements and to analyze the results as a basis for evaluation. In the sense used here, evaluation of the first round Part D programs is to be performed by the USOE and the Congress.

This national study of the federally administered portion of the Part D program was to focus on the results of 50 different projects located in 49 states and the District of Columbia. Each project had its local goals and objectives, and each had been independently evaluated in these terms. It was a condition of the Part D grants that each project arrange for such an evaluation annually and that the evaluation reports be submitted to USOE for review.

For several reasons, it was explicit from the start that this study would not be a compilation of 50 individual project evaluations. First, it was recognized that the diversity among the projects in terms of locally determined procedures and objectives would make meaningful cross-project summary statements difficult under the best of circumstances. Second, it was recognized that there was no consistent framework used by the local project evaluators and that the quality of the evaluations varied considerably regardless of the framework used. Finally, and most important, the study was to focus its limited resources on the federal effort and the degree to which the entire Part D effort realized federal legislative and policy objectives. In this context, each project was viewed as a component of the federal effort and each was expected to contribute to the realization of the federal goals.

Thus, while each project had its own short range objectives and longer range goals, the focus of this study was to be on the accomplishment of federal objectives of Part D and, inferentially, on progress toward the federal goal. Given this perspective, it was to be an assessment of the extent to which the local projects contributed to achieving the purposes of Part D as defined in the legislation and federal policy statements. As such, the study could be considered an assessment of any individual Part D project only to the extent that its objectives were congruent with federal objectives.

The discussion presented in the preceeding chapter described and summarized the salient points of the Part D legislation and its origins. In essence, the legislation provided for the expenditure of federal funds in local school systems in order to produce a specified set of activities which in turn would produce an effect on students which was expected to contribute toward achieving the goal of the legislation.

The typical relationship among the elements of the Part D program may be depicted as in Figure 1 below. Many evaluations encounter difficulties by failing to differentiate conceptually between federal and local inputs, and federally expected and local activities, outcomes, and goals. This important distinction is reflected in Figure 1 and illustrated more fully by Figure 2.

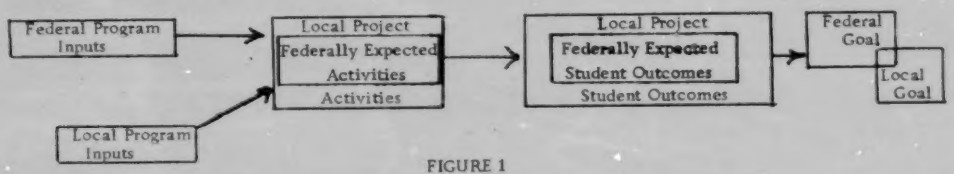

FIGURE 1

PLANNED STRUCTURE OF THE PART D(c) PROGRAM

The relationship presented in Figure 1 between federal and local inputs, activities, outcomes, and goals is meant to be illustrative of one of several logical possibilities. The actual relationship may be expected to vary across projects. Figure 2 below illustrates the five logically possible relationships between the federally expected program outcomes and those of a single Part D project. As suggested by the figure, the locally planned outcomes of a project operated with Part D funds could: a) be the same as the federally expected outcomes, b) be only a portion of the federally sponsored outcomes, c) include all federally expected outcomes within a larger set of local outcomes, d) include only a portion of the federally expected outcomes within a set of broader outcomes, or e) be independent of the federally expected outcomes.

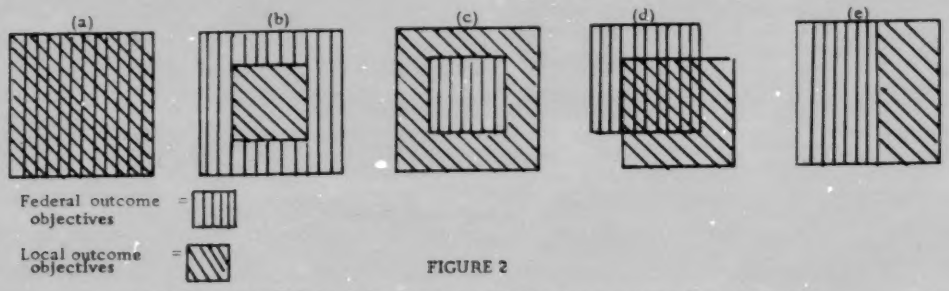

FIGURE 2

POSSIBLE RELATIONSHIPS BETWEEN PART D PROGRAM OUTCOME OBJECTIVES AND LOCAL PROGRAM OUTCOME OBJECTIVES

The same set of possible relationships exists between locally planned activities and federally expected activities and between the federal goal and the local goal. While by definition a Part D project will utilize some Part D funds, in some instances a project may utilize only the funds available through Part D, and in others it may supplement these funds. Although one might hypothesize a relationship between the origin of project resources or inputs and the origin (i.e., federal verus local) of project activities and outcomes, pure logic does not permit presumptions in this regard.

B. Evaluation Framework Applied to Part D

Given the view reflected in Figure 1, the Part D program may be considered for the purpose of this evluation as having four basic elements: (1) Federal Goals; (2) Federal Inputs; (3) Federally Expected Project Activities; and (4) Federally Expected Student Outcomes. The elements build on each other and are linked by three different but cumulative relationships. Each of these is described briefly below. The description of the four program elements is followed by a discussion of the three sets of relationships.

1. Federal Goal

As stated in the federal legislation, the goal of Part D of the 1968 amendments to the Vocational Education Act was to "reduce the continuing seriously high level of youth unemployment." The legislation does not explicitly state that Part D alone will result in a reduction of youth unemployment. Rather, it is implicit that Part D represents one of several steps to be taken in reaching this goal.

The legislation indicates that an effort designed to make schools as effective in meeting the job preparation needs of students not going to college as they are in meeting the needs of the college-bound student would contribute to the realization of the goal of reducing the high level of youth unemployment. The legislation states that this effort requires developing "new ways to create a bridge between school and earning a living for young people," in part by promoting "... cooperation between public education and manpower agencies."

2. Federal Inputs

From the legislation, the Federal Register, and the USOE Part D policy paper, it can be inferred that in order to make school more relevant to the job preparation needs of students, projects were to be funded which aimed at broadening both occupational aspirations and opportunities for youth, especially those with academic, socio-economic, or other handicaps.

To this end the act authorized the appropriation of up to $222,500,000 for a period of four years. Of this amount, $67 million was actually appropriated over the four years with approximately $33,500,000 devoted to the federally administered projects under Part D (Sec. 142(c)). The funds actually appropriated represent the resources allocated toward reaching the goal of reduced youth unemployment through Part D. In other words, the federal funds allocated, in accordance with a legislatively prescribed formula, constitute the federal resources or inputs into each Part D project and in total to the Part D program.

Responsibility for administering these inputs was delegated by the Congress to the U.S. Office of Education, and from there to the USOE Division of Vocational and Technical Education (DVTE). Operationally, it was the responsibility of DVTE to insure that the legislatively available resources were utilized as planned.

3. Federally Expected Project Activities

Ideally, inputs are made with the expectation that outputs will be produced. In this case, grant awards were made with the expectation that certain activities would occur which would lead to achieving student outcomes and ultimately the achievement of the program goal. These activities constitute the planned federal activities at the level of the local school district (LEA). While these activities typically will be contained within the field of local activities, the relationship of the federal activities to local activities may vary from project to project. In some locales, the LEA may focus entirely on the federally expected activities, while in other places only selected federally expected activites may be addressed.

In the context of Section 142(c) of Part D, the "Commissioner's share" effort, the project level activities which federal legislation and USOE policy* specified should result from federal expenditures were that there be:

- in each state a formally designated project functioning in accord with Part D policy and funded at an annual rate of between $100,000 and $200,000;
- in each project, some level of activity directed toward occupational orientation at the elementary and secondary school levels;
- in each project some level of work experience or cooperative education activities;
- in each project an effort to provide intensive job entry skill training to students just prior to their leaving school;
- in each project an intensive guidance and counseling program for students; and
- in each project the initial placement of students leaving school.

In addition to these activities, there were activities mentioned in the legislation but not required in the USOE policy paper. These activities are:

- activities for young workers released from their jobs on a part-time basis for the purpose of increasing their educational attainment;
- activities encouraging the exchange of personnel between schools and other agencies, institutions, or organizations participating in activities to achieve the purposes of Part D, including manpower agencies and industry; and
- activities designed at the secondary level to motivate and provide pre-professional preparation for potential teachers of vocational education.

4. Federally Expected Student Outcomes

The object of expending federal funds to produce a set of program activities at the school district level was to produce a change in students which would contribute to attaining the federal goal of reducing the rate of youth unemployment. Since neither the legislation nor the federal policy statements specified the student outcomes which were to result from implementing Part D projects, it was necessary in designing the evaluation to develop a set of expected outcomes logically related to the federally expected activities at the project level. The

* USOE Policy Paper governing first round Part D Sec. 142(c) projects: AVL V70-1.

implicit assumption was that if these objectives were produced they would contribute toward the realization of the long-range goal of reducing the high level of youth unemployment. These outcomes, when measured and judged attributable to project activities, would serve as indicators to the degree to which progress had been made toward the realization of the long range goal.

The expected student outcomes were specified jointly by the study team and the two salient units of USOE (DVTE and OPBE). The set of specified outcomes which emerged from the interaction was not intended to be exhaustive. Rather, the final set constituted those outcomes which were considered reasonable expectations of Part D projects administered in local school districts relying primarily on federal funds. These objectives are as follows:

- Student participants will be able to identify a greater number of occupations than non-participants.
- Student participants will demonstrate more familiarity with tasks and functions associated with selected occupations than non-participants.
- Student participants will be more familiar with the requisites associated with employment in selected occupations than non-participants.
- Student participants will score higher on pre-vocational, job readiness tests than non-participants.
- Student participants will indicate more positive attitudes toward employment than non-participants.
- The variety of careers being considered by individual participating students will be greater than the variety for non-participants.
- Student participants will indicate more positive attitudes toward guidance and counseling than non-participants.
- More student participants will indicate having a career plan than non-participants.
- More student participants will include further training or education as a portion of their career plan than non-participants.
- More student participants will cite their career preference as their expected career than non-participants.
- The number of student participants citing vocational education as their future career will be greater than non-participants. (Note: This outcome was based on language in the legislation that did not appear in the USOE policy paper.)
- Students will evidence behavioral gains (e.g., less tardiness, fewer absences, fewer disciplinary problems, etc.) as a result of participating in career education activities.
- A greater number of graduates within the past 12 months who have participated in the program will be employed full-time or in further training than non-participants.

5. Relationship One: Federal Inputs to Project Activities

As indicated, the federal resources or inputs were expected to result in a set of specific activities carried out in at least one school district in each state. Program activities in this context are understood to include methods and techniques employed in producing the program outputs, i.e., student outcomes. It is presumed that the relationship between inputs and outputs is considered to be a manageable one, which is to say that adjustments in the inputs will alter the outputs. These adjustments usually are, in fact, changes in project activities.

Typically, an evaluative study first takes some measure of program inputs and outputs. Once this is accomplished, it is necessary to analyze and interpret the findings in order for them to have meaning and utility. Taken separately, there are four possible findings: (1) the inputs occurred as planned; (2) they did not; (3) the outputs occured as planned; and (4) they did not. Once it is known which of these findings is the case it is also necessary to understand the relationship of the inputs and the outputs. As indicated in Figure 3, there are four possible combinations.

	Outputs occurred as planned	Outputs did not occur as planned
Inputs occurred as planned	I	II
Inputs did not occur as planned	III	IV

FIGURE 3

RELATIONSHIP OF INPUTS TO OUTPUTS

Cell I indicates that both the inputs and outputs occurred as planned. In this situation the analysis focuses on program activities in an attempt to discover: (a) what factors have been important to success? and (b) are there better or more efficient ways to produce similar results in the future?

In Cell II, the planned inputs occurred but the expected outcomes did not result. When this happens, it is a function of evaluation to determine the reasons for failure in order to avoid similar failures in the future. Once again, activity considerations are important. It may be determined that changes in method or technique will correct the problem. It may also be determined that activity factors are not the problem. The level of inputs simply may not be sufficient to produce the desired results. In the worst case, it may be discovered that the inputs are themselves inappropriate to produce the desired outcomes. In the first instance, the solution is essentially a problem of improving the management of the inputs. In the latter case policy considerations are involved in changing the planned inputs.

Cells III and IV represent circumstances where it is determined that the planned inputs did not occur. In both cases activity considerations are not as significant as in the cases already discussed. Cell III depicts an instance of the desired outputs resulting from less investment than planned. The obvious questions to answer here are (a) "was the plan faulty and do the desired results occur from a lower input level than was felt necessary?"; and (b) "would the outputs have occurred in the absence of the inputs?" Both questions relate, of course, to policy considerations. At least theoretically, the production of planned outputs, without the planned inputs occurring, should be a rare occurrance. Usually, when the findings reveal that the planned inputs were not made, the reasonable expectation is that the planned outputs also would not be produced, as in Cell IV.

The relationship between federal inputs (defined as the Part D Sec. 142(c) funds available to a project) and the specific results they were expected to produce concerns the manner in which the federal government dispersed the Part D funds and the manner in which the local projects complied with the basic provisions of their Part D grant. More specifically, the set of primary factors governing the relationship between federal inputs and project activities may be characterized as program management. Broadly, the factors investigated were:

- the stated objectives of the projects;
- the nature of the organizations receiving Part D Sec. 142(c) funds; and
- compliance with federal policy with respect to project management.

6. Relationship Two: Project Activities to Student Outcomes

The basic logic with respect to interpreting the data related to this set of process factors is the same as described above. Essentially, if activities and student outcomes occurred as planned, the focus would be on isolating the factors associated with project success and on determining if the most cost effective approaches were used. On the other hand, if activities were not as planned, positive levels of student outcomes would not be expected and focus should be on explaining the unexpected level of activity rather than on unexpectedly low student results.

Based on the assumption at the start of the study that project activities generally would conform to planned federal program activities, the following were determined jointly by DA and USOE as the project treatment factors or indicators most likely to explain the student outcomes of the Part D program:

- Participating students will engage in more career familiarization curriculum activities than will non-participating students.
- Participating students will engage in more out-of-class career activities than will non-participating students.
- Participating students will be exposed to more career resource people in the classroom than will non-participating students.
- A greater number of participating students will be assisted in securing jobs or in entering work experience programs during the school year than will non-participating students.
- Participating students will receive more occupational guidance and counseling during a school year than will non-participating students.
- Participating teachers will encourage students to consider careers in vocational education.

7. Relationship Three: Student Outcomes to Federal Goal

In essence, the relationship between the goal of reducing youth unemployment and achieving the student outcomes associated with Part D is hypothetical. Also, an analysis of this relationship cannot be expected to provide a sufficient explanation of the extent to which the goal was attained. Clearly, the nature of the job market, for example, has as much to do with the level of youth unemployment as the skills and attitudes of the youth.

Given the nature of this relationship and the judgment by USOE that three years of program operations was too short a period to expect full impact from a program operating at the elementary through high school grade levels, this study does not address either the attainment of the long range goal or the relationship between the goal and student outcomes.

C. Summary and Conclusions

In the first section of this chapter a general framework was presented for describing and evaluating a federal program, such as Part D, which is implemented through grants to agencies at the local level. The framework, Figure 2, identifies four program elements and three distinct relationships.

The program elements and processes were discussed briefly in Section B above. It was noted that for this study of the first three years of the Part D program questions pertaining to the program's impact on the long range goal of reducing youth unemployment could not be addressed. Figure 4, below, illustrates the framework as it applies to this study. In this illustration the three program elements and two sets of process factors around which Part D data were collected and analyzed are identified. The figure also illustrates the relationship between a number of chapters in this report. Specifically, Chapter V addresses federal inputs or resources, Chapter VI addresses project level activities or the extent to which the federal resources resulted in the expected activities at the project level; Chapter VII addresses the relationship between the management of federal resources and achievement of project level activities. In Chapter VIII the student outcomes of the Part D program are presented, and in Chapter IX the relationship between these outcomes and project level activities is discussed.

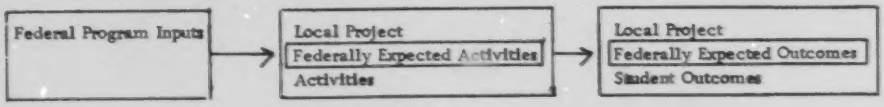

FIGURE 4
EVALUATION FRAMEWORK

In Chapter IV, which follows, theprocedures used to collect and analyze the Part D Sec. 142(c) study data are discussed. Methods and findings pertaining to the descriptive study of state administered projects (Part D, Sec. 142(d)) are presented in Chapter XI.

CHAPTER IV: STUDY METHODS

A. Obtaining Background Information

The general plan for this evaluation began with a process in which background information concerning Part D projects was to be obtained through review of various documents in the files of DVTE. It was expected that grant proposals, third party evaluations, interim reports, USOE site visit evaluations, correspondence, and other grant award materials would provide information describing the characteristics of Exemplary Projects and of the students participating in them. Information regarding the following topics was sought:

1. Characteristics of Exemplary Projects

   - Objectives and major components of projects;
   - Descriptions of the scope of each major component or activity;
   - Identification of materials and techniques used;
   - Organizational and management structure of project;
   - Size, background, qualifications, and roles of project staff;
   - Linkage of project to local and state educational decision-making structures;
   - Linkage of project to manpower agencies, employment service agencies, and employers;
   - Summary of project costs by category and by source of support;
   - Geographic and economic setting in which project is located;
   - Summary and assessment of third party evaluation; and
   - Summary of major changes occurring in project since initiation of Part D funding.

2. Student Characteristics

   - Number of students participating in project out of the total eligible population of school or school system, if project is systemwide;
   - Breakdown of participating students by curriculum (general, vocational, academic), grade level, and component or activity (required in policy paper or in addition to those required); and
   - Number and characteristics of participating students placed and summary of followup information.

This information was to be utilized (a) in developing a project-by-project description of the federally administered projects which could lead to the development of a typology of these projects; and (b) as the data base necessary for developing the research design and instrumentation to be used in the study.

The review indicated that much of the anticipated information was either not available, or was not available in a form that permitted fulfilling the two objectives indicated above. The alternative procedure adopted was to seek consistent and detailed information as to the size and scope of the individual projects by means of a mail survey, and to collect more descriptive data during the study's onsite visits.

In August 1973, each of the 50 projects to be visited was sent a set of forms which were to be completed and returned to DVTE. Each project was required to report the number of participating and non-participating students and teachers by grade and school for participating schools in the school district and the number of students and teachers by grade for non-participating schools. In addition, the projects were asked to report the number of 12th grade participating and non-participating students enrolled in academic, vocational, and general curriculum programs.

By the end of September, approximately half of the projects had responded to the DVTE survey and by December, 34 projects had responded. During December a portion of the requested data was secured from the remaining projects by telephone. This background information regarding participating teachers and students reported by the projects was next used in planning the logistics of the field operations. (As will be elaborated later in the report, the quality of the information varied considerably across sites with regard to the number of participants but was generally accurate with respect to the number of participating schools.)

B. Study Design

During the first three-year cycle of Part D funding, 61 projects were supported in the 50 states and the District of Columbia. Typically, one Part D, sec. 142(c) project was funded in each state. In several cases, the first funded project terminated at the end of one year and another project was started in its place. In four states, more than one first-round project was in operation at the same time. The projects included in this study were selected to meet the following criteria: First, one project in each state with a first-round project operating in FY '73 was to be visited; as Hawaii had no such project, 49 states and the District of Columbia were visited. Second, each project visited must have proposed to focus activity at the elementary school, junior high school, and senior high school levels. Third, if more than one project met the second criterion, the first project funded was selected.

While in the majority of cases the project encompassed only one or a portion of one district, in several states the Part D, Sec. 142(c) project encompassed several school districts. In all but two cases these districts were treated in the same fashion as a single district. Where districts were contiguous, the set of participating districts was defined as one "project" for the purpose of drawing the student sample and obtaining other LEA-specific information. In the two cases where the project included discontiguous districts, time and resource constraints made it impossible to select students randomly from the entire project. In these two cases, the participating district considered the most outstanding by the Part D, 142(c) grantee (the State Education Agency) was selected.

Within each of the 50 projects selected, the broad design called for administering questionnaires and tests to both participating and non-participating students in grades 6, 9, and 12. These grades were chosen because they represented the terminal years for the differing curricula and objectives generally assigned at the elementary, junior high, and senior high levels; they would thus be expected to be the grades where students had received the maximum impact in each of these

three curriculum segments. Questionnaires were also administered to participating and non-participating teachers, and to participating school counselors. In addition, interviews were conducted with local project staff and SEA staff.

Preliminary inquiries indicated that most projects were not able to identify precisely either the students who were "participants" in the program, or what constituted "participation." Considerable effort was devoted to finding satisfactory operational definitions of these terms, since participation was the key factor governing the study design. As a result of this effort, the following definitions were adopted:

- A participating teacher was defined as a teacher who:
  - Received project-supported training, or
  - Utilized project-supplied materials, or
  - Utilized project staff in class or in developing course activities (a project staff member was defined as a person whose salary was paid in whole or in part by Part D(c) funds), or
  - Began engaging in course activities advocated by the project staff since the inception of the project, and was considered by project staff as a "participant."
- A participating counselor was defined as a counselor who:
  - Received project-supported training, or
  - Utilized project-supplied materials, or
  - Received assistance or information from project staff in the implementation of guidance and counseling activities, or
  - Altered some aspects of his guidance and counseling program such that it conformed to activities or approaches advocated by the project staff since inception of the project, and was considered by project staff as a "participant."
- Participating students were defined as follows:
  - 6th grade participating students were current 6th grade students of a participating teacher.
  - 9th grade participating students were current 9th grade students of at least one participating teacher; or students who had received guidance/counseling service from at least one participating counselor or staff member during the current school year.
  - 12th grade participating students were current 12th grade students who:
    - -- were enrolled in a project-supported work experience program; or
    - -- were enrolled in a project-supported "job-entry skill training" program, and were <u>not</u> in a work experience program; or

-- were taught by at least one participating teacher or staff member, and were not in either a work experience program or a job entry skill training program; or

-- were not in one of the above groups and had received guidance/counseling service (including job placement) from at least one participating counselor or staff member during the current school year; or

-- had been exposed, during the current school year, to a project-supported activity other than those cited above, and were not in one of the above groups.

The two definitions for the 9th grade are not mutually exclusive, and no distinction was made between them for sampling purposes. The 12th grade groups, however, were defined to yield mutually exclusive groups, and sampling and coding procedures were designed to preserve these groupings for analytic purposes. As indicated in Figure 5, below, the groupings are defined in a hierarchical manner; i.e., the students in the first group may also have received the services cited for the other groups, the students in group (b) may also have received the services cited for groups (c), (d), and (e), etc.

The approach to stratifying the 12th grade participants was developed in response to difficulties encountered during pre-test visits to Part D projects. During these visits it was found that high school students often participated in several project activities, but typically projects had no records of the number of activities in which a student participated, and that names of individual students were available by class but unduplicated lists of participants had to be specially constructed for this study. The 12th grade strata were defined so as to make feasible the construction of unduplicated lists of participants from which samples were drawn. Each student sampled was asked questions that were developed separately for each project to determine whether he had participated in the activities in addition to those primarily associated with his stratum.

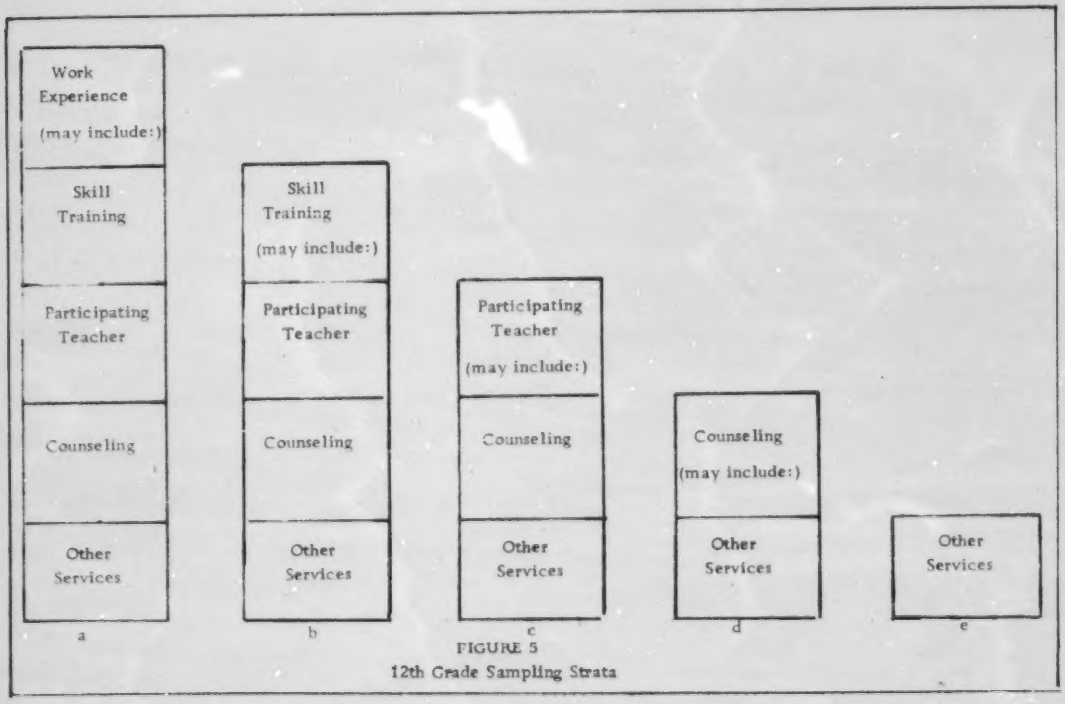

FIGURE 5
12th Grade Sampling Strata

The original design had called for a four-way classification of 12th graders, on the basis of "course of study," i.e., academic, vocational, general, and out-of-school students. This approach proved to be infeasible, however, since most projects were not serving out-of-school students and most LEAs did not classify students into the other three groups.

The basic design called for the administration of tests and questionnaires to both participating and non-participating students at the 6th, 9th, and 12th grade levels. In addition, questionnaires were administered to participating and non-participating 6th grade teachers as well as to participating teachers in grades 1-5, 7-9, and 10-12, and to counselors. (The non-participant teacher questionnaire was similar to, but not identical with, the questionnaire completed by the participating teachers.) For ease of exposition, these groups of non-participants will be defined in the context of the discussion of sampling, which follows.

C. Sampling Procedures: Students

The basic principle followed in the sampling procedures was to insure that within each project, each participating student within the 6th grade, 9th grade, and each of the five strata of the 12th grade had the same chance of being included in the sample as every other student in the same stratum. In addition, the number of students to be sampled in each stratum was to be 5% of the participants in that stratum and no fewer than 30 students. Students were to be selected randomly, without regard to classroom units; thus the student became the unit of analysis.

Due to logistical, time, and cost considerations, it was decided to draw the student sample for each stratum from no more than five schools. In projects having five or fewer schools involved in a given stratum, a proportional sample was drawn from each school, i.e., the number of participating students sampled from each school was proportionate to that school's representation in the total number of participating students in the stratum. In projects having more than five schools involved in a given stratum, five schools were selected by using a weighted random procedure, i.e., each school's chance of being selected was proportionate to that school's representation in the total number of participating students in the stratum. An equal number of students was then drawn from each of the five schools selected. Both of these methods -- the proportional sample involving all schools when there was no school selection, and the weighted procedure for selecting schools when there were more than five schools -- gave each participating student in the project stratum an equal chance of being sampled.

In both methods, total sample size for a stratum was calculated on the basis of 5% of the number of participants in that stratum, with a minimum of 30. Where a stratum had less than 30 participants in the project, all of the students were used in the sample.

In the four cases where the number of participating schools increased substantially during the third year of the project, student sampling was limited to the schools which participated for the entire project period. For example, in one state where 11 high schools were participating during the third project year, the student sample was drawn from one high school with which the project had been associated since the first year of operation.

The field procedures developed for selecting the specific students involved the use of a table of random numbers applied to rosters of students in each student group. Detailed instructions were provided to the field workers to assure successful implementation of the sampling plan. Table 2 presents a summary of the sampling approach used in the 50 projects that were visited.

TABLE 2

DISTRIBUTION OF PROJECTS BY SAMPLING APPROACH, BY STRATUM

Sampling Approach	Grade (stratum)						
	6th	9th	12th				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Proportional approach (approx. 5%; 600 or more participants)	7	4	--	1	1	--	--
Fixed number approach (approx. 30; less than 600 participants)	39	39	21 [1/]	15 [2/]	25 [3/]	5 [4/]	3 [5/]
None sampled: No participants [6/]	2	4	28	32	23	43	43
None Sampled: Administrative reasons [7/]	2	3	1	2	1	2	4
Total	50	50	50	50	50	50	50

1/ Due to the small number of students in the stratum and scheduling difficulties, in eight of these projects fewer than 25 students were tested.

2/ Due to the small number of students in the stratum and scheduling difficulties, in five of these projects fewer than 25 students were tested.

3/ Due to the small number of students in the stratum and scheduling difficulties, in seven of these projects fewer than 25 students were tested.

4/ Due to the small number of students in the stratum and scheduling difficulties, in three of these projects fewer than 25 students were tested.

5/ Due to irregular school attendance, the number tested in two of these projects was less than 10; because of the special nature of all three projects, their results are not included in general analyses.

6/ The absence of participants in a stratum does not necessarily imply the absence of a project activity; at the 12th grade, for example, in 12 projects all counseling and guidance was provided in conjunction with other activities. Also, where projects had completely terminated an activity, students could not be tested.

7/ In one project no testing at the 6th, 9th, and 12th grades could be scheduled; in two projects, no 9th grade testing could be scheduled but 6th and 12th was possible: and in another, no 12th grade testing was possible although 6th and 9th was. In the case of one project, so few students at the 6th grade level actually were tested that they were excluded from the analysis. In the case of stratum 7 (12th grade "other"), either students did not attend school on a regular basis, or they could not be identified.

For each group of participating students selected for testing at each project, a comparable group of non-participating students was selected, if available. These "control" students were also selected randomly (not on a classroom basis), and were taken from the following sources, in order of preference:

- same schools as the participating students; this source was used only if the school did not apply any special selection criteria (e.g., academic achievement) for placing students into classes taught by participating teachers;

- different schools within the same school district; selection of schools was based upon the judgements of school officials and study staff concerning income levels of parents served by the schools, the ethnic composition of the student bodies, and the size of the student populations. Where these factors were judged to be equal, preference was given to schools located relatively close to the participating schools. The same control school was utilized for two or more of the participants' schools if the latter were similar to each other with respect to the above factors;

- different school district; comparable schools were selected outside of the participating school district, using the same criteria indicated above.

The sources of the control students at each grade level are shown in Table 3. Overall, control groups were available for 138 participant groups; twenty-four were from the same schools as participants, sixty-six from the same school district, and forty-eight were from different districts.

TABLE 3
SOURCE OF CONTROL STUDENTS

Source of Control Students	Number of Projects				
				12th Grade	
	Total	6th Grade	9th Grade	Work Exper.	Other
Same schools	24	7	5	7	5
Different Schools, same LEA	66	24	24	4	14
Different LEA	48	14	13	9	12
Not Available	10	1 [1/]	1 [2/]	1 [3/]	6 [4/]
Not Applicable	[illegible]	4	7	29	13
Total	200	50	50	50	50

[1/] Michigan

[2/] Michigan

[3/] Vermont

[4/] Iowa, Mass., Michigan, Nebraska, Utah, and Virginia

As shown in the table, two types of control groups were utilized at the 12th grade level. If the project had a work experience/cooperative education component, the control group for these participants consisted of comparable students enrolled in a work experience program that was not supported by the project; such control groups were located for 20 of the 21 projects that had a work experience component. If there were participating students in any of the other 12th grade strata, the control group consisted of comparable students not enrolled in a work experience program; this type of control group was utilized in 32 projects. Both types of control groups were used in 16 projects.

Table 4 presents a summary of the number of participating and non-participating students tested. Some participating students were tested in each of the 50 projects visited. However, because of the small numbers in one project and the special characteristics of those tested in another (both were from the 12th grade "other" stratum), data from only 48 of the 50 projects were used for most student outcome analyses.

The comparability of the participants and the non-participants was checked with respect to two characteristics: sex and ethnicity. The percentage distributions of these characteristics for each group of students are shown in Table 5.

TABLE 4
TOTAL STUDENTS TESTED BY STRATUM: PARTICIPANT/NON-PARTICIPANT

Category	Grade (stratum)							Total
	6th (1)	9th (2)	12th (3)	12th (4)	12th (5)	12th (6)	12th (7)	
No. Participants	1,447	1,391	511	427	712	105	39[1/]	4632
No. Projects	46	43	21	16	26	5	3	50
Mean Participants per Project	31.5	32.3	24.3	26.7	27.4	21.0	--	92.6
No. Non-Participants	1,318	1,297	446	499	483 (276)[2/]	--- (214)[3/]	-- --	4043
No. Projects	45	42	20	15	23	5	--	46
Mean Non-Participants per Project	29.3	30.9	22.3	33.3	21.0	(42.8)	--	87.9

[1/] The numbers tested in these projects were: 5, 7, and 27. Because of special entrance requirements for these components, no comparison groups could be found and the results from testing these students are excluded from most analyses.

[2/] The total number of non-participants used for comparison with Group 5 participants was 759; 276 were also used for comparison with Group 4 participants.

[3/] The total number of non-participants used for comparison with Group 6 participants was 214; 53 of these were also used for the Group 4 comparison and the remainder were also used for the Group 5 comparison.

TABLE 5
SEX AND ETHNICITY OF PARTICIPANTS AND NON-PARTICIPANTS, BY GROUP

Characteristics \ Student Groups	6th Grade		9th Grade		12th Grade Students							
					Work Experience Group		Skill Training Group		Participants in Tutoring Group		Comparison Group	
	P	NP	P	NP	P	NP	P	NP	P	NP	P	NP
N	1,447	1,318	1,319	1,297	511	446	427	499	712	759	105	214
% Male	50.9	50.0	47.6	44.1	54.2	48.3	65.8	50.3	45.7	49.0	38.8	43.4
% Female	49.1	50.0	52.4	55.9	45.8	51.7	34.2	49.7	54.3	51.0	61.2	56.6
% Black	28.1	22.5	18.5	23.0	13.3	17.0	21.0	26.1	12.1	14.6	4.8	4.2
% White	61.4	68.1	69.9	67.2	79.4	37.7	76.9	67.3	81.0	79.8	88.5	82.7
% Other	10.5	9.4	11.6	9.8	7.3	9.3	2.1	6.6	6.9	5.6	6.7	13.1

Statistical comparisons between participants and non-participants with regard to the sex distribution, by means of the chi-square test, indicated no significant differences except in the job entry skill training group, where 66% of the participants, but only 50% of the non-participants, were males. For the ethnicity factor, however, the tests indicated significant differences in four of the six student groups.* As a result of this finding, and because it was believed that ethnicity may in fact have been an unwanted influencing factor in the results obtained for other variables, it was necessary to institute a weighting procedure, prior to making comparisons between participants and non-participants, which would eliminate the differences in ethnicity between the two groups. Using this procedure, in which the response of each student for any variable is weighted in inverse proportion to his ethnic group's over-or under-representation in the total, any statistical comparison between participants and non-participants became, in effect, a comparison between two groups having identical ethnic distributions. This approach was followed in all comparisons between total groups of participants and non-participants in each of the six student groups. No weighting procedure was used in analyses within projects; in the few instances where large ethnicity differences occurred within a project they will be cited in the discussion of the findings.

D. Sampling Procedures: Teachers and Counselors

In accordance with the study design, in each project information was to be obtained from selected participating teachers, non-participating teachers, and participating guidance counselors. The sample of participating teachers in each project consisted of:

- each teacher of the selected 6th grade participants;
- approximately 10 teachers in grades 1-6 from the schools from which participant students were sampled (in addition to the 6th grade teachers above); where grades 1-6 were not in the same school(s), teachers of younger children were sampled from schools feeding into those selected at the 6th grade;
- approximately 15 teachers in grades 7-9, drawn randomly from the participating teachers in each school from which the 9th grade participants were selected, with a minimum of three teachers from each school; and
- approximately 15 teachers in grades 10 through 12, drawn randomly from the participating teachers in each school from which the 12th grade participants were selected, with a minimum of three teachers from each school.

Table 6 presents the number of participating teachers that were surveyed. As indicated, approximately 14 % of the teachers identified as participating in the Part D projects responded. Responses to the survey were obtained in 49 of the 50 projects visited; the mean number of responding teachers per project was 29. More specifically, the number of respondents per project ranged from a low of six teachers to a high of 48 teachers. The distribution was fairly even: in nine projects the number of respondents ranged from 10 to 19; in 13 it ranged from 20 to 29; in 15 it ranged from 30 to 39; and in 11 it ranged from 40 to 48.

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* This characteristic was measured by the observation of the test/questionnaire administrator, who assigned one of five codes to each student. The code categories were Black, Spanish-surnamed, American Indian, White and Other. The chi-quare tests were computed on the basis of all five categories.

TABLE 6
SAMPLE OF PARTICIPATING TEACHERS

Grade Level	Total participating teachers	Number of respondents	% of total responding
Elementary* (1-6)	4,861	586	12.1%
Junior High* (7-9)	3,325	358	10.8%
Senior High* (10-12)	1,823	489	26.8%
Total	10,009	1,433	14.3% (average)

* While teachers often had responsibilities cutting across categories, for sampling purposes they were assigned to a stratum on the basis of a judgment of project staff with respect to their major time commitment.

The sample of non-participating teachers in each project consisted of the teacher(s) of the 6th grade non-participating students. Non-participating teacher data were obtained in 41 of the 45 projects in which 6th grade non-participating students were tested. The number of non-participants surveyed per project ranged from a low of one teacher in ten cases to a high of nine teachers in one project. The total number surveyed was 122, and the mean number surveyed from the 41 projects was 3.0.

The sample of guidance counselors consisted of all counselors defined as project participants. Counselor survey data were obtained in 44 of the 50 projects visited. The number of counselors surveyed per project ranged from a low of one in eight projects to a high of 27 in one project, 19 in another, and 13 in a third. The total number surveyed was 229, and the mean number surveyed from the 44 projects was 5.2.

E Instrumentation

During the first months of the study, each of the eight legislative objectives was elaborated into a set of testable hypotheses. An initial set of hypotheses was developed by the Development Associates study team and then reviewed and modified as appropriate by the USOE project officer and USOE Part D program staff. From this list, a final set of hypotheses and their indicators was adopted based on the results of the pre-test, site visits and a consensus of USOE and Development Associates staff regarding their applicability for each Part D objective. As the hypotheses were presented in the context of Chapter III and will be presented along with their indicators and related student outcome data in Chapter VIII, they will not be repeated here.

It was found that several of the student outcome variables contained in the hypotheses were adequately measured by one or more of the sub-scales of the Career Maturity Inventory (CMI).* During the planning stage of the study, this test was judged to be the most appropriate standardized instrument available, since, in addition to covering major variables of interest, it also covered grades 6 through

* Published by: CTB/McGraw-Hill, Del Monte Research Park, Monterey, California 93940.

12, had a suitable administration time, and had been standardized on students from throughout the United States. The Inventory consists of an Attitude Scale and a five-part Competence Test. These are:

Part 1: Knowing Yourself (Self-Appraisal)
Part 2: Knowing About Jobs (Occupational Information)
Part 3: Choosing a Job (Goal Selection)
Part 4: Looking Ahead (Planning)
Part 5: What Should They Do? (Problem Solving)

The Attitude Scale is made up of 50 true/false items; each of the parts of the Competence Test consists of 20 multiple choice items.

For variables not covered by the CMI, questionnaire items were written for students', teachers', and guidance counselors' questionnaires, as appropriate.* Separate student questionnaires were prepared for each of the three grade levels being tested. Insofar as possible, for those items which were utilized at more than one grade level the format and the wording of the items were the same in the three questionnaires. Questionnaires were also prepared for the teachers and guidance counselors, and all items and format were reviewed by project staff, teachers, counselors, and students during five visits to projects to pre-test materials and procedures. These visits were scheduled such that modifications in items and formats resulting from the first visits were reviewed by individuals in projects visited later. The items and procedures were developed and modified so that total testing time per student would be under $2\frac{1}{2}$ hours.

In addition to the questionnaires which were completed by students, teachers, and counselors, a "project information record" (PIR) was developed for the use of the field staff. The PIR contained a set of tables on which information gathered from project and school files was recorded (e.g., enrollment data, placement data, expenditure data, etc.), and a set of questions to be asked in the course of the on-site interviews. The interview questions and data tables were pre-tested during the five site visits made during the design phase of the study.

The initial study plan called for a survey of employers in each project site and a telephone and mail survey of school districts in each state not receiving Part D funds but reported as implementing activities as a result of the funded projects. Questionnaires were developed for these two facets of the study, but based on the results of the pre-test visits it was decided by USOE and the study team to eliminate these two aspects of the study since reliable data across prjects could not be secured with the available time and resources.

The three student questionnaires, the two teacher questionnaires, the guidance counselor questionnaire, and the project information record are on file with the U.S. Office of Education.

F. Field Procedures

The various data collection instruments and the procedures for using them were field tested at five project sites, and revisions were made to reduce ambiguities and to simplify the data-collection process. The field tests were conducted by two-person teams who administered the questionnaires and tested procedures on a small number of individuals in each site. Tests and questionnaires were not administered during the study visit to those individuals involved in the field tests.

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* The instrumentation did not include tests of specific job skills, since neither the legislative objectives nor the information obtained about the projects indicated that these were pertinent. The projects were not required to provide vocational training and no project placed particular emphasis on such efforts.

The data-collection plan called for a two-person study team to visit each project for a period of one week. Each site visit was first coordinated with the SEA and the dates of the visit confirmed by phone. At this time the information obtained in the DVTE mail survey mentioned earlier was verified, and sampling and logistical issues were discussed.

Each project was asked to assist in the identification of suitable individuals to be employed as local testers when the team arrived on site. These testers were drawn from the substitute teacher rosters and hired by the on-site teams. The locally hired testers were then trained, on-site, to insure that the tests were administered properly and that they were thoroughly familiar with the site-specific questions to be asked of each group of students. The entire procedure was then rehearsed and each tester was supplied with a roster of the students selected by the DA staff for testing, the time and location of the testing, the name of the school contact person, and the tests and questionnaires.

The test administrations were spot checked by a field team member during the course of the site visit and each local tester was debriefed upon the completion of each test administration. Written notes on the administrations were made for use in the analysis stage.

As an aid to the field study teams, a detailed field procedures manual was prepared. This served both as the basic document used in an intensive three-day training program for team members prior to their first visit and subsequently during their visits to projects.

The field work was accomplished between mid-February and the end of May, 1974. Four field teams visited eleven projects each and a fifth team, consisting of the study director and assistant director, visited six sites. The membership of the field teams was consistent throughout the study and each team communicated with the study director or assistant at least once a week.

At the completion of each visit the teams reviewed all materials and packaged them for central data processing in Washington. Each team also completed a narrative project description and a narrative report summarizing their field procedures. Any deviations from the prescribed plans necessitated by local conditions and any other information which might affect student outcome data was noted in these reports and was utilized in data analysis and interpretation. The narrative project descriptions, and the fiscal and participant data reported in Chapters V and VI, were sent to each project for review and comment. The narrative reports are compiled in a separate volume on file with USOE and available through ERIC.

G. Data Processing and Analysis

Student test data and all questionnaires were prepared for computer analysis. For the test data, an optical scanning technique was used to put each record on tape, followed by computer scoring of each record and merging each student's scores with his questionnaire responses. For the questionnaires, the process involved coding several variables, followed by key punching and making corrections of errors found by means of computerized editing.

The basic data were tabulated and analyzed using the formats and statistics of the computer program SPSS (Statistical Package for the Social Sciences). The principal format used for the computer outputs involving frequencies and comparisons of student data was participants vs non-participants within grade level or 12th grade group. This format was utilized for obtaining both project-by-project data and totals across projects. For participating teacher and counselor data, the tabulations were run on a within-project basis, and totals by school level (elementary, middle, and senior high). Totals for 6th grade participating teachers and non-participating teachers were also obtained.

The overall questions which the analysis was designed to answer were: a) did participants demonstrate higher performance with regard to pre-hypothesized "outcome" variables, and b) if so, are these differences attributable to program treatments, or other program characteristics?

CHAPTER V: FEDERAL INPUTS
"A Comparison of the Planned and Actual Federal Inputs"

A. Introduction

Inputs are understood to be the resources applied to the attainment of an established goal or goals. The identification of planned inputs, of actual inputs, and a comparison of the two are important to any evaluative study.

For purposes of this evaluation, it was decided to define the planned federal inputs as the sum of the funds allocated to the 50 projects being studied as reflected in the grant actions of the USOE. The grant actions represent the commitment of funds. Therefore, this commitment does, in a very real sense, represent the planned inputs at the federal level.

If the grant actions represent the planned commitments of resources, expenditures must represent the actual commitment of resources. In determining the actual inputs for this study, it was necessary to obtain the expenditure data for each project. The sum of this data represents, for purposes of this exercise, the actual inputs into the system. Table 7 compares the planned inputs to the actual inputs; that is, displayed are the data concerning USOE grant actions, project expenditures, and the difference between these (in percentages).

The original study design called for this information to be obtained early in the study from the files of the USOE. The grant action information was taken from these federal records. Expenditure data, however, was not available at the federal level and it was necessary to include this data in the information to be gathered on-site by the study teams.

Budget and expenditure information was not generally available from project staff. In most cases, the LEA's fiscal office maintained the financial records. As the table indicates, six projects were unable to provide the information sought. This was due, primarily, to a conflict of demands on the fiscal offices and the low priority placed upon searching three-year-old records in the press of other immediate needs.

A review of the information available does, however, present a good picture of the relationship between the planned and actual federal inputs.

B. Findings

The table indicates for each project the grant action, the project budget, and the percent change between the two for each of three years of federal funding. In addition, project total expenditure for the year and the percent change from budget to expenditure are indicated.

An inspection of the data reveals that 88.6% of the projects reporting underspent their first year budgets. This represents 39 of the 44 projects reporting data for that year. The underspending ranged from a -0.6% to -60.8%. The average underexpenditure was -19.2% per project. The District of Columbia and Florida projects combined 142(d) funds and 142(c) funds. They were unable to provide information on 142(c) funds only. Hence, they reflect budgets in excess of the grant actions for the first year.

The legislation provides that "funds available to the Commissioner pursuant to section 142(c) shall remain available until expended." Based upon this provision, unexpended project funds were usually carried over as an addition to the second program year budget except in the case of one project, where the program year was extended. This rebudgeting is reflected in column "h" as the percent change between the second year grant action and the second year budget (columns f and g).

TABLE 7

PART D GRANT ACTION/BUDGET/EXPENDITURE/% CHANGE BY PROJECT FOR EACH YEAR OF PART D FUNDING

Project	Program Year I					Program Year II					Program Year III				
	a Grant Action	b Budget	c % Change	d Expenditure	e % Change	f Grant Action	g Budget	h % Change	i Expenditure	j % Change	k Grant Action	l Budget	m % Change	n Expenditure	o % Change
Alabama	$111,070	Same	-0-	$ 47,875	- 56.9	$163,396	$220,062	34.7	$169,643	- 22.9	$150,207	$206,821	37.7	$198,185	- 4.2
Alaska	101,000	Same	-0-	100,648	.4	104,992	Same	-0-	104,992	-0-	104,472	Same	-0-	104,222[1]	-.2
Arizona	104,961	Same	-0-	75,393	- 28.2	128,420	157,988	23.0	138,601	-12.3	123,373	142,760	15.7	130,776[1]	-8.4
Arkansas	103,832[2]	Same	-0-	67,817	- 34.7	133,521	183,389	37.4	155,422	-15.3	126,547	137,566	8.7	136,374	-.9
California	196,379	Same	-0-	196,379	-0-	200,000	Same	-0-	121,859	-39.1	200,000				
Colorado	106,170	Same	-0-	98,848	-6.9	135,344	Same	-0-	131,417	-2.9	129,000	Same	-0-	116,016	-10.1
Connecticut	107,824	Same	-0-	84,189	-21.9	144,817	168,452	16.3	133,243	-20.9	136,357	172,805	20.7	Not Available	----
Delaware	101,495	Same	-0-	90,964	-10.4	108,563	Same	-0-	109,181	.6	106,925	Same	-0-	107,597	.6
District of Columbia	101,877	$205,813[3]	102.0			110,437	219,437	98.1			108,512	345,024	218.0		
Florida	193,457	245,009[3]	26.7	245,009	-0-	140,166	284,317	102.8	284,317	-0-	175,322	323,109	84.3	323.109	-0-
Georgia	114,025	Same	-0-	88,377	-22.5	180,341	204,292	13.3	163,518	-20.0	164,147	187,779	14.4	158,181	-15.8
Idaho	102,290	Same	-0-	71,176	-30.4	113,118	144,249	27.5	141,432	-2.2	110,675	113,792	2.8	113,792	-0-
Illinois	130,027	Same	-0-	103,191	-20.6	162,979	Same	-0-	116,517	-28.5	162,979	Same	-0-	126,086	-22.6
Indiana	114,822	Same	-0-	45,051	-60.8	131,000	201,191	53.6	106,994	-46.8	131,000	225,143	71.9	115,604[4]	-48.7
Iowa	108,344	Same	-0-	76,153	-29.7	147,730	Same	-0-	134,222	-9.1	184,638	Same	-0-	184,780	.1
Kansas[5]	27,410	Same	-0-	25,756	-7.9	44,600	Same	-0-	44,105	-1.1	38,000	Same	-0-	34,813[6]	-8.4
Kentucky	109,891	Same	-0-	100,890	-8.2	156,658	162,658	3.8	153,969	-5.3	145,014	151,337	4.4	143,218	-5.4
Louisiana	111,673	Same	-0-	100,902	-9.7	166,436	174,313	4.7	149,201	-14.4	181,965	Same	-0-	181,965	-0-
Maine	102,862					141,746					112,985				
Maryland	110,680					161,433					168,700				
Massachusetts	114,343					130,355					186,593				
Michigan	126,114					154,793					154,772				
Minnesota	163,581	Same	-0-	125,406	-23.3	150,000	162,086	8.1	147,316	-9.1	150,000	183,492	22.3	170,582	-7.0
Mississippi	107,761	Same	-0-	83,605	-22.4	144,452	168,607	16.1	115,744	-31.4	135,347	185,347	36.9	159,386	-14.0
Missouri	109,176	Not Available	---	102,526[7]	-6.1	176,204	170,254	-3.4	113,608[8]	-33.3	159.153	Not Avail.	----		
Montana	102,227					112,727					110,100				
Nebraska	104,262	Same	-0-	90,202	-13.5	124,412	133,812	7.6	97,336	-27.3	152,172	157,231	3.3	62,707[1]	

TABLE 7 -- cont.

PART D GRANT ACTION/BUDGET/EXPENDITURE/% CHANGE BY PROJECT FOR EACH YEAR OF PART D FUNDING

Project	Program Year I					Program Year II					Program Year III				
	a Grant Action	b Budget	c % Change	d Expenditure	e % Change	f Grant Action	g Budget	h % Change	i Expenditure	j % Change	k Grant Action	l Budget	m % Change	n Expenditure	o % Change
Nevada	$101,113	$ 76,832 9/	-24.0	$ 60,026	-21.9	$106,377	$182,508	71.6	$ 55,699	-69.5	$135,338	$231,050	113.3	$231,050	-0-
New Hampshire	101,908	Same	-0-	92,215	-9.5	95,266	104,910	10.1	87,118	-17.0	104,593	110,310	5.5	108,335	-1.8
New Jersey	118,703	Same	-0-	116,820	-1.6	139,228	Same	-0-	123,623	-11.2	139,228	Same	-0-	132,915	-4.5
New Mexico	103,340	Same	-0-	57,704	-44.2	113,128	164,765	38.3	163,667 4/	-.7	115,582	116,676	1.0	In Process	
New York	146,979	Same	-0-	128,395	-12.6	198,538	Same	-0-	185,120	-6.8	198,538	230,540	-16.1	142,256	-38.3
North Carolina	115,967	Same	-0-	96,995	-16.4	191,454	201,426	5.2	176,588	-12.3	173,003	206,841	19.6	192,004	-7.1
North Dakota	102,035	Same	-0-	82,296	-19.4	111,659	Same	-0-	103,131	-7.6	109,378	Same	-0-	137,645	25.8
Ohio	130,64	Same	-0-	82,233	-37.1	165,180	218,630	32.4	171,261	-21.7	165,180	202,988	22.9	175,307	-13.6
Oklahoma	107,252	Same	-0-	87,763	-18.2	141,536	Same	-0-	109,946	-22.3	133,044	Same	-0-	104,242	-21.7
Oregon	105,948	Same	-0-	105,948	-0-	134,066	Same	-0-	98,415	-26.6	127,845	163,496	27.9	152,308	-6.8
Pennsylvania	132,210	Same	-0-	102,054	-22.8	168,000	198,155	18.0	176,321	-11.0	168,000	189,834	13.0	166,576 10/	
Rhode Island	102,449	Same	-0-	97,490	-4.8	114,028	Same	-0-	110,441	-3.2	111,254	Same	-0-	111,254	-0-
South Carolina	108,906	Same	-0-	102,482	-5.9	151,009	157,233	4.3	157,233	-0-	140,974	153,444	8.9	153,194	-.2
South Dakota	102,131	Same	-0-	89,171	-12.7	112,206	125,166	11.6	114,666	-8.4	109,811	120,311	9.6	117,431	-2.4
Tennessee	111,605	Same	-0-	91,280	-18.2	166,495	Same	-0-	163,366	-1.9	152,949	Same	-0-	172,744	12.9
Texas	133,111	Same	-0-	82,673	-37.9	159,426	Same	-0-	143,226	-10.2	179,444	195,644	9.0	185,651	-5.1
Utah	103,340	Same	-0-	81,780	-20.9	119,128	140,672	18.1	121,234	-13.8	115,582	126,996	9.9	135,020	6.3
Vermont	101,240	Same	-0-	101,240 11/	-0-	107,105	Same	-0-	101,240 11/	-0-	105,627	Same	-0-	94,127 10/	
Virginia	113,709	Same	-0-	113,007	-.6	178,518	161,582	-9.5	153,693	-4.9	180,705	Same	-0-	180,683	-0-
Washington	109,861	Same	-0-	86,661	-21.1	156,474	179,674	14.8	176,194	-1.9	146,024	166,673	14.1	150,608 1/	-9.6
West Virginia	105,820	Same	-0-	99,820	-5.7	133,339	Same	-0-	118,530	-11.1	125,681	146,490	16.6	146,161	-.2
Wisconsin	112,268	Same	-0-	104,569	-6.9	126,152	133,850	6.1	112,428	-16.0	126,152	145,769	15.6	70,267 4/	-51.8
Wyoming	101,049	Same	-0-	100,703	-.3	106,013	Same	-0-	103,611	-2.3	104,761	Same	-0-	98,124	-6.3

1/ Estimated from partial data.

2/ Magnolia Budget: Year I $20,581 Year II $21,588 Year III $16,764

3/ Includes State share

4/ Project Extended.

5/ State Grant: Year I $106,744 Year II $138,622 Year III $131,740

6/ One of 3 projects extended 9 months.

7/ 6/71 to 3/73

8/ 4/73 to 12/31/73, extended to 2/8/74.

9/ Data as provided by grantee.

10/ Not a final budget figure.

11/ Vermont State law does not permit carryover.

Source: Project fiscal records reported by grantees as reflecting expenditures to end of third year of program operation. No-cost extensions are not reflected, except as noted.

Of the 45 projects for which second year budget totals were reported, 25 indicated budgets higher than the second year grant action. This represents 55.6% of the projects reporting. The projects ranged from budgeting 3.8% over the grant action to 71.6% over with the median being 14.8% per project. Both Florida and District of Columbia have been excluded from these figures because the reported data did not permit separation of the 142(c) funds from others.

There were 14 projects that underspent their budgets the first year and did not carry over the funds the second year. While no specific reasons for this phenomenon were discovered by the field teams, it appears that the nature of the budgetary process, size of the LEA, and mechanization of accounting functions were factors in the failure of some of these LEAs to rebudget first year carryover funds. In some instances the budgetary cycle was initiated too early for the fiscal sections to project carryover, request budget modification of OE, secure approval, and submit this to the school board.

In larger LEAs the data processing center typically was unaware that funds could be reprogrammed. They did not alter the normal fiscal program which did not provide for such a contingency.

Twenty projects did not have an increase of their second-year budget over the grant action. In the case of four projects, this was due to their first-year expenditures being equal or nearly equal to the grant action figure. Two projects reported a second year budget that was actually lower than the grant action.

The second year expenditures, like the first year's, were for the most part below the amounts budgeted. Of the 44 projects reporting data, 86.4% were underspent during the second program year. This indicates that 38 underspent during the second year. The average amount of the underexpenditure also was close to that of the first year and stood at -15.96% (-19.2% for year 1). The range of the second year underexpenditure ran from a low of -0.7% to -69.5%.

As can be seen, the overall second year data relating expenditure to budget is not basically different than that for the first year in the aggregate. Two projects were underspent the first year but not in the second year. One, in fact, slightly overspent its budget (+0.6%). One project, on the other hand, did not underspend during the first year but did do so during the second year.

Comparing the second year expenditues to the second year grant actions presents a substantially different picture, however. This comparison reveals that the second year expenditures much more closely approximated the grant action figure than they did the budget figure. The projects underspent the second year grant actions by an average of -6.30% as compared to the -15.96% reported above. Thirteen projects reported expenditures that were higher than the second year grant action but less than their budget figures.

Twenty-six projects carried unspent second year funds over to the third program year. There were 12 projects which had unexpended second year funds that did not show an increase in the budget over the third year grant action, indicating that the funds were not carried over. Ten of these 12 were projects that did not carry over unexpended first year funds to the second year.

One project carried first year underexpenditures over to the second year and was not underspent that year, but reported a budget 8.9% higher than the grant action for the third year.

Examination of the third year expenditures reveals that 26 projects underspent their budget out of 37 reporting expenditure data for that year. This represents 70.3% of the reporting projects. California did not report third year data because the

project was in its second year of operation. In the other cases, the final budget and expenditure data was not available because the projects had either not yet run the full third year term or had done so only recently and were awaiting final closeout of their books.

Underexpenditures ranged from a low of -0.2% of budget to a high of -51.8%. The average underexpenditure was 12.1%. *

In the final program year, five projects reported expenditures in excess of the amounts budgeted. The actual dollar amounts involved ranged from a low of $142 to a high of $28,000. With one exception, these projects are ones that did not adjust their budgets to include carryover funds from previous years. During the first two program years only one project reported exceeding its budget. That one reported a 0.6% overexpenditure during the second program year.

When considering the allocation of resources or the level of inputs into a system, time is an important consideration. If, for example, the total allocation of resources for a particular effort was to be three person years, different levels of effort are described by three persons each working for a one-year period, as opposed to one person working for three years. While it was expected, based on legislation, that the Part D programs would be limited to no more than three years, it was found that 22 of the 50 projects studied had received time extensions and were in operation for more than a three-year period. These extensions in time were at "no additional cost to the government."** Programmatically, this means that in 44% of the projects the expenditure of federal resources was at a rate below that planned.

C. Summary and Conclusions

In summary, a review of the year by year input data reveals that in most projects in no single year did the inputs occur at the level planned. Taking the three years in the aggregate and considering both expenditures and time frames, it was found that in 37 (74%) out of the 50 projects the actual inputs were below the level of the planned inputs.

The generally high level of project underexpenditure in their first program year would appear to be attributable to program start-up requirements.

Several possible explanations for this apparently slow start-up suggest themselves. The first one relates to the timing of the grant awards. LEAs may have had difficulty responding to new efforts initiated after the school year had actually begun. The recruitment of certified personnel, for example, is increasingly difficult as the summer ends. Most have signed contracts by early to middle August. Once the school year has begun and schedules established, it is difficult to adjust the already full schedules of personnel to permit the assignment of new or additional responsibilities and tasks. Table 1 in Chapter II indicates that 25 of the projects studied were awarded their first year grant during the month of June, three in July, three in August, three in September, four in October, one each in November and December, four each in January and February, and two in March.

Of the seven states reporting the highest rates of underexpenditure in their first program year, three had grants awarded in June, two had awards made in the middle of the school year (January and February) and the two remaining received awards in August and September. This does not appear to lend support to the hypothesis that the timing of the grant may affect the time required for program start-up.

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* Prior to using average figures in this section, both means and medians were determined and it was found that the use of one as opposed to the other did not substantially alter the picture presented. The mean figures are reported.

** Sec. 145. "Financial assistance may not be given under this part to any program or project for a period exceeding three years."

Another possible explanation for the speed with which the programs became fully operational relates to the nature of the initial project activities. As indicated in the next chapter, many reported that they emphasized planning, curriculum development, and staff training and development during the first year. These activities are generally not as expensive as are activities intended to deliver the planned interventions. The second and third year expenditures approximate the grant action amounts. This suggests that once underway the projects adhered to their original plan.

The relationship between the second and third year grant action to expenditure and budget to expenditure figures clearly suggest that in the second and third program years the projects generally spent as originally planned. The projects carrying over unexpended funds from one year to another appear not to have spent these carryover funds. This indicates that typically the third year underexpenditure is a reflection of the first year underexpenditure. This may indicate that the projects did not fully understand the nature of the carryover process and failed to adjust their plans to reflect the additional funds. On the other hand, it may also indicate that the projects planned to end the third program year with excess funds. In some cases this might permit the programs to continue to the end of a school year. In others, it may have been to cushion the effect of the termination of federal support and reliance upon local funding.

Logically, it may be expected that the absolute level and the rate of the expenditure of federal funds would have an effect on program outcomes, and the effect of rate and level of expenditure will be explored in the chapters which follow.

CHAPTER VI: [redacted]TIVITY OBJECTIVES

A. Introduction

In Chapter 3, the planned federal activity objectives were defined as those activities outlined in Section 143(a)2 of the legislation. These activities were expected to produce certain student outcomes, and the production of these outcomes was to be considered an indicator that the Part D effort had contributed to the legislative goal of reducing the level of youth unemployment. Thus, an adequate explanation of why the student outcomes did or did not occur as anticipated requires an understanding of how successful the federal Part D effort was in reaching the planned activity objectives.

As indicated on Table 8 (p. 42) the federal legislation listed eight activities to be supported by Part D funds. The policy paper (AVL-770-1), on the other hand, established certain priorities by requiring that all projects direct some level of activity toward occupational orientation, work experience programs, intensive occupational guidance and counseling, and the initial placement of all students at the completion of their schooling.

In addition, the policy paper specified that each project was to include an effort to broaden and improve the vocational education curricula by emphasizing activities designed to provide ". . . special training in job entry skills . . . for students not previously enrolled in vocational programs . . . just prior to the time that they leave school."

The remaining legislatively defined activities were not addressed in the policy paper. A review of the project proposals and third party evaluations revealed that none of the fifty projects studied had program objectives explicitly designed to initiate the legislative activities not covered in the policy paper and some projects had objectives not included in the legislation. Therefore, this study focused on the policy paper activities, and included an "other" category for projects with special activities.

In order to assess the student outcomes resulting from activities presented in the policy paper it was necessary to determine which students would potentially be affected by each activity. The results of this matching of students and policy paper activities is shown in Table 8. For purposes of this study elementary school activities were defined to include grades 1 through 6, junior high activities included grades 7 through 9 and senior high activities included grades 10 through 12.

According to the USOE policy paper, the national focus for the first round programs would be on projects which combined in one operational setting each of the five required activities. The findings with regard to project activities reported below first address the issue of the extent to which these activities were produced in the fifty projects studied. This discussion is then followed by findings which relate to the issue of the level of activity as indicated by the number of participating students in each project. It should be noted that the focus of this chapter is on the broad categories of program activities. Findings with respect to the more specific student treatments associated with each broad category will be presented in Chapters VIII and IX.

TABLE 8 PROGRAM ACTIVITIES

Federal Legislation Activities	Related Policy Paper Activities	Student Grade Level
• Familiarize elementary and secondary students with broad range of occupations	Broad occupational orientation at elementary and secondary levels	Elementary, junior high, senior high
• Provide students with educational experiences through work	Work experience and cooperative education programs	Senior high
• Provide intensive occupational guidance and counseling in last school years	Intensive occupational guidance and counseling during the last years of school	Senior high
• Placement	Initial placement of all students at the completion of their schooling	Senior high
• Broaden or improve vocational education curriculum	Job entry skill training for students not previously enrolled	Senior high
• Produce personnel exchanges between schools and other agencies and businesses	Not addressed	
• Provide educational opportunities for out-of-school youth released part time from their jobs	Not addressed	
• Motivate and prepare students to seek training as vocational educators	Not addressed	
• Other activities which pursue legislative objectives		

B. Findings

The findings related to project activities are presented in Table 9. The table reports the number of participants reported by each project at the elementary, junior high, and senior high school levels. The number of participants for each of the three years of program funding is indicated. In addition, the third year participants are compared to the total LEA enrollment for that year. Finally, the table indicates for each project the senior high school activities specified in the policy paper for which some level of effort was found for at least one program year.

The data for this table were derived from the responses of the grantees to the field teams, from grantee responses to a DVTE survey of participants in September 1973; and from the grantee's interim reports and third party evaluations. Where significant inconsistencies were found among these sources, the figures judged to be most consistent were used.

1. Funded Activities

All of the projects reported some elementary (1-6) and junior high (7-9) school participants for at least one year except the project in Massachusetts. Twelve projects reported no elementary school participants the first year. Of these, 12, Utah reported elementary school participants in only the third year. At the junior high school level 15 projects reported no participants during the first year. Four of these did not have participants the second year, but all but one did have by the third project year. Ten of the 11 reporting no elementary school participants for the first program year also reported no junior high school participants for that year.

TABLE 9. -- PROGRAM PARTICIPANTS BY YEAR, ACTIVITY COMPONENT, AND PERCENTAGES OF THIRD YEAR PARTICIPANTS

Project	Elementary School Activities (Grades 1-6)					Junior High School Activities (Grades 7-9)					Senior High School Activities (grades 10 - 12)											
	Participants			Total Third Year Enrollment	Percent Participants of total enrolled	Participants			Total Third Year Enrollment	Percent Participants of total enrolled	Activities: Participants			Total Third Year Enrollment	Percent Participants of total enrolled	Components						
	Project Year I	Project Year II	Project Year III			Project Year I	Project Year II	Project Year III			Project Year I	Project Year II	Project Year III			Work Experience	Skill Training	Participating Teacher	Counseling & Guidance	Placement	Other
Alabama	NI[1/]	NI	2,211	14,684	15.1	NI	NI	968	8,350	11.6	0	0	250	5,828	4.3	✓	✓				
Alaska	4,785	4,785	4,785	4,785	100.0	745	745	745	2,031	36.7	0	70	90	1,820	5.0						✓
Arizona	519	1,002	1,451	28,345	5.1	934	1,529	1,840	15,997	11.5	32	1,440	1,821	13,606	13.4		✓		✓	✓	✓
Arkansas	8,600	10,999	11,290	11,290	100.0	4,500	5,702	6,019	6,019	100.0	3,876	4,615	4,802	4,802	100.0	✓		✓	✓	✓	
California	270	780	NA	1,746	44.7	720	945	NA	985	95.8	1,000	775	NA	775	100.0	✓	✓	✓	✓	✓	✓
Colorado	0	450	882	NI		0	0	279	NI		700	600	1,857	NI				✓		✓	✓
Connecticut	1,175	1,442	1,471	10,419	14.1	775	898	1,185	5,386	22.0	520	770	916	4,105	22.3	✓	✓	✓		✓	
Delaware	1,932	1,796	1,891	1,895	100.0	632	644	619	950	65.2	52	52	37	931	3.2			✓	✓	✓	
District of Columbia	0	500	1,081	77,927	1.4	0	323	1,489	33,399	4.5	0	0	0	24,807	0						
Florida	1,000	2,500	5,000	37,5[illegible]	13.3	400	1,200	3,400	22,361	15.2	0	1,000	3,100	17,169	18.1		✓	✓	✓		✓
Georgia	680	1,322	4,294	28,362	15.1	795	1,497	1,543	13,573	11.4	150	290	360	10,094	3.6			✓	✓	✓	
Idaho	NI	3,303	3,143	3,143	100.0	NI	1,476	1,492	1,492	100.0	1,376	1,470	1,527	1,527	100.0	✓	✓	✓	✓	✓	
Illinois	2,834	4,017	2,028	8,422	24.1	2,040	1,705	1,497	3,076	48.7	122	94	123	3,085	4.0	✓	✓		✓	✓	
Indiana	3,929	3,929	3,711	43,623	8.5	15,494	15,448	12,760	21,652	58.9	0	0	0	17,601	0						
Iowa	7,997	7,725	7,506	11,206	67.0	3,564	3,550	3,536	5,382	65.7	2,927	2,936	2,026	4,594	65.9			✓		✓	
Kansas[2/]	944	950	1,017	1,017	100.0	201	564	459	459	100.0	20	450	508	508	100.0	✓	✓	✓			
Kentucky	644	614	586	586	100.0	0	239	341	360	94.7	0	0	249	270	92.2		✓	✓		✓	
Louisiana	3,037	3,040	3,040	53,065	5.7	53	57	56	17,124	0.3	605	638	657	26,655	2.5	✓	✓			✓	
Maine	1,073	2,288	2,946	2,946	100.0	747	1,337	1,736	1,736	100.0	19	36	86	1,163	7.4	✓	✓			✓	
Maryland	1,350	1,635	560	102,838	0.5	20	65	65	47,237	0.1	0	0	0	32,836	0						
Massachusetts	0	0	0	0		0	0	0	0		36	60	60	60	100.0						✓
Michigan	3,000	3,999	6,000	10,295	58.3	170	250	2,754	4,553	60.5	0	20	40	3,729	1.1			✓		✓	
Minnesota	475	1,350	1,850	10,832	17.1	0	600	1,200	6,716	17.9	72	72	72	6,377	1.1	✓				✓	
Mississippi	4,104	4,034	4,097	4,097	100.0	745	689	800	2,237	35.8	1,602	1,646	1,554	1,554	100.0	✓	✓	✓	✓	✓	

TABLE 9. -- cont.

Project	Elementary School Activities (Grades 1-6)					Junior High School Activities (Grades 7-9)					Senior High School Activities (grades 10 - 12)										
											Activities					Components				
	Participants			Total Third Year Enrollment	Percent Participants of total enrolled	Participants			Total Third Year Enrollment	Percent Participants of total enrolled	Participants			Total Third Year Enrollment	Percent Participants of total enrolled	Work Experience	Skill Training	Participating Academic Courses	Guidance	Placement	Other
	Project Year I	Project Year II	Project Year III			Project Year I	Project Year II	Project Year III			Project Year I	Project Year II	Project Year III								
Missouri	0	200	482	28,700	1.7	0	122	233	16,277	1.4	0	100	75	12,142	0.6			✓		✓	
Montana	0	2,011	2,545	3,125	81.4	0	700	1,350	1,994	67.7	0	0	550	1,974	27.9	✓		✓		✓	
Nebraska	0	624	827	28,441	2.9	0	88	1,320	14,512	9.1	14	132	251	12,502	2.0		✓	✓	✓	✓	
Nevada	300	1,500	7,900	16,649	47.5	0	250	277	7,674	3.6	120	138	180	6,375	2.8			✓			
New Hampshire	180	430	537	1,300	41.3	210	270	300	600	50.0	245	245	245	660	37.1	✓	✓		✓	✓	
New Jersey [3]	800	925	1,000	2,278	43.9	400	500	550	688	79.9	500	600	700	2,382	29.4	✓		✓	✓	✓	
New Mexico	265	1,100	1,638	1,638	100.0	390	450	822	822	100.0	400	530	558	558	100.0	✓		✓	✓	✓	
New York	1,260	1,543	3,926	12,306	31.9	600	4,500	5,416	5,961	90.9	0	0	501	5,478	9.2			✓		✓	
North Carolina	854	854	854	16,948	5.0	448	448	448	8,272	5.4	365	365	365	3,444	10.6	✓	✓	✓	✓	✓	
North Dakota	838	939	3,647	4,289	85.0	397	1,342	1,752	2,074	84.5	276	753	1,311	1,936	85.0			✓	✓	✓	
Ohio [4]	0	1,196	1,425	68,629	2.1	0	0	838	35,687	2.4	0	0	774	32,941	2.4			✓		✓	
Oklahoma	269	252	722	32,185	2.2	75	86	136	16,227	0.8	54	80	86	15,574	0.6		✓				
Oregon	481	885	1,126	3,390	33.2	0	0	820	2,247	36.5	206	508	615	1,909	32.2	✓	✓			✓	
Pennsylvania	420	1,320	290	27,787	1.0	932	7,931	7,537	15,942	47.3	26	216	400	15,489	2.6	✓				✓	
Rhode Island	1,120	1,205	1,100	5,198	21.2	600	700	750	2,945	25.5	30	200	280	2,190	12.8	✓			✓	✓	
South Carolina	0	1,874	1,965	4,159	47.3	0	385	386	1,276	30.3	137	130	141	1,478	9.5	✓		✓	✓	✓	
South Dakota	728	1,201	1,512	1,512	100.0	242	403	1,001	1,001	100.0	328	323	330	968	34.1	✓		✓		✓	
Tennessee	960	2,460	2,460	62,162	4.0	180	650	1,140	32,286	3.5	527	717	1,033	28,178	3.7	✓	✓	✓		✓	
Texas	1,767	4,142	9,818	32,584	30.1	1,743	2,369	4,199	16,468	25.5	2,065	1,934	1,657	13,321	12.4		✓		✓		
Utah	0	0	10	29,176	0.03	73	121	66	15,038	0.4	191	232	181	13,235	1.4					✓	✓
Vermont	415	624	677	865	78.3	290	311	330	412	80.1	348	355	249	383	65.0	✓	✓	✓	✓		
Virginia	0	625	625	NI		0	250	250	NI		150	430	530	NI		✓		✓	✓	✓	✓
Washington [5]	0	400	400	34,200	1.2	175*	245	275*	18,325	1.5	525	655*	275*	13,500	1.7		✓			✓	
West Virginia	1,060	2,671	2,587	2,641	98.0	0	1,108	1,291	1,291	100.0	30	1,005	985	985	100.0	✓	✓	✓	✓	✓	
Wisconsin	0	25	325	NI		0	180	300	300	100.0	0	0	120					✓			
Wyoming	1,451	1,438	1,346	1,346	100.0	812	835	778	778	100.0	778	712	717	717	100.0	✓	✓	✓		✓	

[1] Grantee would not supply because this was considered sensitive information.

[2] Estimated from K-8 and 9-12 aggregate data for Clay Center Project only.

[3] Data reflects 7 and 8 and 9-12.

[4] Junior High and Senior High estimated from aggregate data.

[5] Estimated from aggregate data.

* Grades 9-12 included.

NA = Not Applicable

NI = Not indicated by Grantee.

At the senior high school level, 26 projects (52%) reported work experience participants during at least one of the three project years. Twenty-three projects (46%) reported participants in job entry skill training. Thirty-one of the projects (62%) reported high school participants receiving occupational orientation through curriculum infusion techniques applied by participating teachers. Twenty-two projects (44%) reported some high school participants receiving intensive counseling and guidance.

Thirty-seven (74%) of the grantees reported some level of high school placement activity supported in whole or in part by the Part D project. In general, projects did not maintain records which would permit them to report the actual numbers of students placed. Most often placements were recorded in each student's counseling file making retrieval difficult and time consuming. In addition, the placement figures reported frequently represented an estimate based upon partial return of mail survey forms. Because of the difficulty encountered in securing reliable placement information, placement data are not included in this report.

These findings reveal variation in the reaching of the planned federal activity objectives. This variation is summarized in Table 10, below.

TABLE 10

NUMBER OF PROJECTS REPORTING FEDERAL ACTIVITY COMPONENTS

Activities	Number of Projects Reporting Participants	% of 50 Projects
Elementary Activities	49	98%
Junior High Activities	49	98%
Senior High Activities		
• Placement	37	74%
• Senior High Participating Teacher	31	62%
• Work Experience Programs	26	52%
• Job Entry Skill Training	23	46%
• Intensive Guidance and Counseling	22	44%
• Other Activities	7	14%

The policy paper required each project to combine "... in one operational setting," all of the following activities:

- work experience programs;
- job entry skill training;
- intensive guidance and counseling;
- initial placement of all students; and
- occupational orientation at the elementary and secondary school levels.

The information reported by the projects reveals that 13 projects (26%) carried out all of the activities as required in the policy paper. Thus, in 13 projects the planned federal activity objectives were reached and in 37 they were not. *

2. Level of Activities

The policy paper requirements did not indicate the level of effort expected of any activity other than placement (which specified all students completing school). Level of effort is also not addressed in the legislation or the Federal Register. It is, however, an important consideration in any evaluation. Table 9 identifies the activities of each project and indicates overall level of effort in terms of the number of participants at the elementary, junior high, and senior high school levels.

The fifty projects reported a total of 231,176 third year participants. Of that number, 120,584 (52.2%) were elementary level (grades 1-6) students, and 77,348 (33.5%) were junior high level students (grades 7-9). The remaining 33,244 (14.4%) were high school students. At the high school level, 2,974 work experience students were reported, and there were 6,642 skill training participants, 18,604 participating teacher students, 3,813 counseling and guidance participants, and 1,211 reported in the "other" project activity category.

These data indicate that 55.9% of the high school level participants were involved in occupational familiarization activities defined as infusion of career education concepts into the regular classroom curricula by participating teachers. Job entry skill training activities involved 20.0% of the high school participants. Counseling and guidance activities involved 11.5% of the total while work experience accounted for 8.9%.

Comparing the number of third year participants to the total school enrollment in the third year reveals wide variation between projects. Eleven projects reported their entire elementary enrollment as project participants. Two projects, on the other hand, reported fewer than one percent of their enrollment as project participants. Six projects reported 100% of the junior high enrollment as participants and seven projects reported all senior high students as project participants. Four projects reported the entire LEA enrollment as participants: Arkansas, Idaho, New Mexico, and Wyoming.

It was found that many projects had difficulty identifying which students were actually project participants. This difficulty was reflected by their inconsistent responses concerning the number of participants. Comparing the data provided the field teams during the site visits and the data provided by the DVTE survey, mentioned earlier in this chapter, revealed figures that varied as much as 84% for one project.

Projects appeared to have the most difficulty identifying senior high school level participants in familiarization activities. This was largely because the focus of most projects was on the participating teacher. Since a given teacher would have as many as five different classes of students, tracking by student was usually too difficult and time consuming. A similar pattern emerged when intensive guidance and counseling activities were carried out as separate activities rather than as part of a skill training or work experience component.

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* In a separate study task, the grantees were asked to provide information concerning the cost of each area of project activity. The responses produced virtually the same picture of project activities as did the identification of activities and participants discussed above. With only 37 grantees responding, the number that reported costs in all five of the minimum activities was 16. (See Table 57, Chapter X).

Because of heavy case loads and because participating counselors usually engaged in many types of counseling, it was idfficult for projects to identify specific students who received occupational guidance and counseling.

From the table it can be determined that projects averaged in the third program year (as determined by the mean) 2,512 elementary school participants, and that these participants comprised on the average, 45.5% of the total elementary school enrollment of the grantees. For the junior high school level there was an average of 1632 participants per project, comprising 46.9% of the total enrollment. At the high school level the overall number of participants averaged a total of 723 students per project. This indicates that the total project effort at that level involved an average of 34.7% of the high school enrollment for the project grantees. For each high school activity group, the average number of participants in projects having the activity was reported to be:

- work experience - 128 students per project;
- skill training - 350 students per project;
- participating teacher - 642 students per project;
- counseling and guidance - 484 students per project; and
- other activities - 242 students per project.

Table 9 also indicates the number of participants for each of the three years of project operation. These data indicate that the projects tended to increase the number of students affected each program year. In general, even the projects reporting a decrease in the number of participants for a given group from year to year indicated that the decrease represented a decrease in the enrollment in the participating schools for that year, as opposed to a planned reduction in the number of participants. Increases, on the other hand, tended to reflect the addition of new schools to which familiarization activities had been extended or an increase in the number of teachers involved in the project.

C. Conclusions

In Chapter V it was concluded that the federal inputs did not occur as planned across all 50 projects. As indicated, there was an average project underexpenditure of 19.2% of the approved budget for the first project year, 15.9% the second year, and 12.1% the third year. Further, given these findings, it was expected that the overall level of activities would be somewhat less than planned.

The data presented in Table 9 and discussed above indicate that both on an annual basis and across the three years of program operations the extent to which the activities specified in the policy paper were carried out varied considerably across the 50 projects. In terms of the three year totals, while most projects reported students associated with most of the specified activities, relatively few (26%) reported students in all of them. In addition, among those reporting students, the number involved varied considerably from project to project and over time.

In general there was a marked increase in project activity in the second year of operations. For example, ten projects reported no first year elementary level participants but did report such participants for the second year. At the junior high school level, eleven projects reported the same experience. At the senior high school, in seventeen cases there were participants in an activity group the second year but not during the first. By the same token, in fourteen projects the rate of increase in the number of participants at the elementary grades was

greatest the second program year. At the junior high school level this occurred in eighteen projects, and at the senior high school level in fifteen projects this was true for one or more of the activity groups.

This increase during the second year is consistent with the finding in Chapter V with regard to the relationship between project budgets, expenditures, and grant actions. As indicated, during the second and third years most projects expended Part D funds at a rate consistent with their budgets as originally prepared and submitted with their grant application. These findings with respect to the increasing level of activities over time tend to confirm a conclusion suggested in Chapter V that during the first year many projects focused on planning and other start-up activities which were relatively inexpensive and did not have an immediate impact on students. As indicated by the three year findings, however, it can not be assumed that the explanation for the cross project and cross-year variations is soley accounted for by first year activities and project start-up requirements. In the chapter which follows a discussion of the relationship between project activities and the level of expenditures is presented. In addition it will explore the relationship between selected aspects of program management and the variations across projects in the activities produced.

CHAPTER VII: PROGRAM MANAGEMENT

A. Introduction

Chapters V and VI discuss the federal inputs or resources provided to the 50 projects studied and the extent to which these inputs resulted in activities as outlined in the legislation and required in the policy paper. From the discussion of inputs it was concluded that in most projects the inputs did not occur at the level planned; that is, in most cases the projects did not expend all the federal funds available to them. The underexpenditures in the first program year typically may have been due to project start-up requirements; in many cases, the three-year total of unexpended federal funds may be explained in terms of the amount not expended during the first year of operation. In some cases, however, projects reprogrammed unexpended funds and, according to their budget documents, planned to spend them the following year; in some of these cases the reprogrammed funds were expended as budgeted and in other cases they were not.

On the basis of the findings with respect to the rate and amount at which federal Part D monies were expended by the 50 projects, it was expected that variations in the level of project activities attributable to federal inputs would be found. The findings presented in Chapter VI with respect to project activities confirmed this expectation. In fact, it was found that not only did projects vary considerably in terms of the level at which activities occurred, they varied in terms of the very presence of activities the federal legislation and the USOE policy paper required of Part D projects.

The implicit assumption in both the Part D legislation and USOE policy is that the funded activities at the local level are expected to produce student outcomes consistent with the purpose of the Part D program. Given that the inputs did not occur as planned, it is logical to expect that the planned activity objectives would not be reached as, in fact, they were not. This, in turn, leads to the reasonable prediction that student outcomes would not be produced as planned. For this reason it is appropriate at this point to explore possible explanations for the failure of the expected activities to occur. In view of the findings discussed in Chapter VIII which support the general conclusion that in most projects the student outcomes of the Part D effort were not achieved, this exploration regarding the relationship between program inputs and the activities which resulted is especially significant.

Logically, the explanation for the variations across the 50 projects on the expenditure of federal funds provided and the activities which resulted may relate either to the nature of the federal management and funding processes or to the management practices of the recipients of the federal funds. Put another way, the first question which must be addressed in explaining the relationship between federal inputs and project activities is: Did USOE actually fund projects which were expected to produce the Part D activities called for by the legislation and policy paper? The second is: Is there anything associated with either the nature of the organizations receiving the grants or with the practices they followed in managing the federal funds which may explain the activities which were produced? From the federal perspective both questions relate to the broad area of program management.

The findings presented below are divided into three categories. The first relates to the nature of the stated objectives of the projects which were funded. The second category relates to the management practices followed by recipients of Part D grants. Specifically, these findings relate to the extent to which the projects complied with management practices which were addressed by federal policy. Since these practices were required of all Part D grantees by virtue of receiving federal funds, the findings address both the

questions of whether the grantees complied with these requirements and whether compliance was associated with the nature of the activities produced.

The third category relates broadly to the nature of the organizations receiving Part D grants. The findings here relate to the question: Does the nature of the grantee (i.e., whether it is an SEA, LEA, etc.) relate to either the management practices followed or to the nature of the activities produced? In other words, does the nature of the organization receiving Part D funds explain variations in activities not explainable in terms of project objectives or specific management practices. This assessment may be of use in making program management decisions in the future.

B. Findings

1. Project Objectives

Prior to the field phase of the study, the statements of project objectives contained in project proposals, interim reports, and third party evaluations for each of the 50 first round projects in this study were reviewed and recorded. During the field visits project staff were asked to confirm the accuracy of these statements or update them as appropriate. The statements of project objectives were then related to the seven activity areas contained in the Part D legislation and to the activity performance data reported in Chapter VI. A project objective was judged to relate to legislative objectives either if explicit reference was made or if in the combined judgment of the two senior project analysts who reviewed all project statements the legislative objective was clearly implicit.

With respect to the program objectives contained in the legislation but not in the USOE policy paper, it was found that none of the 50 projects had stated objectives providing for exchanges of personnel between schools and other agencies. Similarly, none of the projects indicated objectives which would provide for increasing the educational attainment of young workers released from their jobs on a part-time basis. It was also found that none of the 50 projects listed the motivation of young people to become vocational educators or to provide pre-professional training for potential vocational educators as an objective. Findings with respect to program objectives found in both the policy paper and legislation are summarized below.

Elementary and Secondary Familiarization

Forty-seven of the fifty projects stated objectives with respect to familiarizing elementary and secondary school students with the range of occupations and requisites for those occupations. Of the three remaining, one was found to have actually engaged in elementary and secondary familiarization activities. This suggests either unclear or vaguely worded objectives were stated for this area or that the project engaged in activities for which it had no written objectives. One project never did engage in elementary level activities, and the remaining project involved ten elementary students during the final program year.

Work Experience

Thirty-three projects stated objectives clearly relating to the provision of work experience activities to high school students and 17 did not state such objectives or did not address the subject clearly. Of the 33 stating work experience objectives, 19 (57.6%) were found to have actually implemented work experience or cooperative education components attributable to the projects and 14 did not. Of the 17 projects not stating work

experience objectives, seven were found to have implemented some level of work experience activities as part of the elementary program. As was indicated above, this would suggest vague project objectives.

Job Entry Skill Training

Forty-one projects indicated objectives clearly relating to broadening and improving vocational curricula. The policy paper indicated that activities designed to provide specific training in job entry skills for students not previously enrolled in vocational programs just prior to the time they leave school were to be included in each exemplary project. This priority was established for each project and relates to the legislative objective of broadening and improving the vocational curricula. Of the 41 projects stating such objectives, 22 were found to have initiated activities providing job entry skill training attributable to the exemplary project and 19 did not. The nine projects not stating objectives related to skill training were found, with one exception, not to have implemented skill training activities.

Intensive Occupational Guidance and Counseling, and Placement

Forty-one projects indicated objectives relating to the provision of intensive occupational guidance and counseling to students during their last years of school. Only 32 projects, however, also included the actual placement of students as a clear objective. Seven projects did not list either counseling or placement objectives, and two indicated placement objectives but not counseling and guidance objectives. Of the 41 projects stating counseling and guidance objectives, 17 were found to have implemented a counseling and guidance component identified apart from other program treatment and 24 did not. Three of the nine projects that did not state such objectives were found to have implemented such activities and six did not.

Twenty-five of the thirty-two projects with stated objectives relative to the placement of students were found to have implemented such activities as a part of the exemplary projects, and 12 of the 18 projects not stating placement objectives were found to have actually carried out such activities as part of the project effort.

Other Objectives

In addition, 42 (84%) projects were found to have objectives which related to activities not mentioned in the legislation. Ten of these projects included staff training objectives in this list of "other" objectives and six of these also included dissemination objectives. No other patterns were found in the statements of objectives.

Thirty-two projects stated one or more objectives that were either too general or too unclear to be classified into one of the above categories, or in terms of additional planned activities. Forty-four projects stated objectives relative to some proposed activity other than the seven discussed here.

That projects would have stated objectives and implemented activities designed to reach them is to be expected. On the other hand, for projects not to have stated objectives addressing required areas or to have stated objectives but no activities is not.

The major explanation for this phenomenon relates to the problem of project definition. The policy paper indicates special favor would be granted to projects incorporating funds from a variety of sources into a single project. At the time the grantees were preparing their proposals, many had already implemented a work experience or cooperative education effort within the LEA. The ongoing effort was in many instances cited as fulfillment of the work experience requirements. When no changes in the regular, ongoing effort attributable to the Part D project were found, the effort was not considered for purposes of this study to be a component of the exemplary project.

In three instances project personnel and literature referred to jointly funded efforts which were later determined to be distinct and separate administrative entities. In these cases the efforts also were not considered to be components of the exemplary project.

It should be clearly pointed out that no willful mismanagement or misuse of funds is implied by these findings. On the contrary, the phenomena discussed here appear to have resulted from unclear definition of the projects in terms of objectives, scope, and participants and upon good faith efforts to maximize the effect of limited program resources by avoiding activity areas being addressed by other initiatives, thereby narrowing and intensifying project focus.

This, of course, implies that in many projects attempts to depart from the traditional offerings, especially with respect to work experience and skill training efforts, was limited. This may have resulted from a scarcity of research and developmental efforts in these areas or because grantees were not aware of the results of recent research.

Table 11, below, summarizes the findings with respect to the relationship between project activities and objectives.

TABLE 11
PROJECT ACTIVITIES AND PROJECT OBJECTIVES

Category	# of Projects Engaged in Activities Specified in USOE Policy Paper				
	Elementary & Secondary Familiarization	Work Experience	Skill Training	Guidance & Counseling	Placement
Projects with objective and activity	47	19	22	17	25
Projects with objective but without activity	0	14	19	24	7
Total with objective	47	33	41	41	32
Projects without objective but with activity	2	7	1	3	12
Projects without objective and without activity	1	10	8	6	6
Total without objective	3	17	9	9	18

2. Project Management Practices

This category of findings concerns the management practices followed by the individual projects. As noted in preceding chapters, this study was not intended to be an evaluation of individual projects, nor was it intended to focus on project management. In part, this was because formal Part D effort had ceased in 29 cases when the study teams visited the projects, and in many of these cases key project personnel were not available for interview. As a result, both the depth and quality of the information gathered across the 50 projects with respect to project management varied. Nevertheless, it was

possible retrospectively to gather consistent and reliable information on several generic aspects of project management which may help to explain the variations in project activities resulting from Part D grants. These findings are reported in six subsections below:

- Sound Plan of Operation;
- Project Evaluations;
- Linkage to Manpower Agencies;
- Project Directors;
- Project Dissemination Activities; and
- Project Continuation and Replication.

Each of the four subcategories on which findings are reported is based on language found in the USOE policy paper, the legislation, and/or the Federal Register. As such, they may be considered as required of recipients of Part D grants.

a. Sound Plan of Operation

The Federal Register (103.25;a;2) specifies that each project was to be judged, in part, upon the soundness of its proposed plan. It was further specified that included in the criteria for soundness was consideration of the extent to which the procedures for achieving the objectives of the project were appropriate and technically sound. Several indicators of the soundness of each project's managerial operating procedures were collected. While no single indicator may be considered a sufficient measure, taken together they provide an indication of project operations. In addition, although a positive response to the questions posed below does not signify that a project was operationally sound, it may be argued that a negative response to more than one of the questions suggests that it was not. The results of reviewing project information in terms of these indicators of basic management practices are summarized below:

i. Written Work Plan

In each site the study team was to determine whether or not the project had a written work plan detailing project activities in relation to time, and if so, whether the plan was used to guide and control day-to-day project operations. It is commonly held that such a plan is an invaluable tool in managing any endeavor.

As indicated in Table 12, below, 31 of the 50 projects were reported as having a written plan of work. Of those with such a plan, it was found that it was utilized as an operational guide to the project in 58.1% of these cases. Because the inability of the study team to identify work plans may have been directly related to the fact that the projects were terminated (i.e., no longer expending Part D funds) at the time of the visit, the data in Table 12 is divided into two categories based on funding status. These data show that only 50% of the ongoing projects that had a plan utilized it as an operational guide.

TABLE 12
USE OF WRITTEN WORK PLAN GOVERNING PROJECT OPERATIONS

Type of Project	Total # of Projects	No Plan	Written Plan	% of total with plan	# Guided by plan	% with plan guided by plan
Ongoing projects	21	9	12	57.1	6	50.0
Terminated projects*	29	10	19	65.5	12	63.2
Total	50	19	31	62.0	18	58.1

* Terminated projects are those not expending Part D(c) funds at the time of visit; those operating on "no cost" extensions are considered ongoing.

A comparison of the 18 projects which reported that they utilized a written work plan to guide project operations with the findings reported in Chapter VI revealed that eight projects had essentially performed federally expected activities which conformed to their stated objectives and ten had not. In general, there appears to be no meaningful relationship between utilizing a written project work plan and engaging in expected federal activities.

ii. Participant Data

As discussed in prior chapters, at various points in the study efforts were made to determine the number of students participating in project activities. Also, as indicated, the projects varied with respect to the ease and consistency with which they could provide this information. The response to the DVTE mail survey seeking participant information by one of the projects summarizes the difficulties encountered by many projects in maintaining accurate records of participants, especially at the senior high school level.

> "It becomes increasingly difficult to determine the number of 'participating' students as they progress through junior and senior high school. In most junior high and in all high schools, students attend classes by subject and not by grade level. Therefore, even if we know that a certain Biology teacher is participating in [the project] it is very difficult and time consuming to determine how many freshmen, sophomores, juniors, and seniors he has in that class."

Nevertheless, given that the purpose of expending Part D funds was to produce activities which would affect students, it follows that sound project management typically would require accurate and consistent records of participating students. Without such records it would at best be difficult to plan activities and to evaluate results.

Operationally, the indicator of the accuracy and consistency of project records regarding student participants was the consistency of the data reported by the projects at various points in the study. It should be noted that this does not directly address the accuracy of the records, but rather the issues of their very existence and their internal consistency. It may be presumed that if the data reported is not consistent, the records are likely to be incorrect.

It was found that 15 projects reported data to the study team which was inconsistent with that reported in the DVTE participant survey. In one case there was a variation of 84% in the number of participants reported. In another four projects, the grantees were unable to report the number of participants by grade level to either DVTE or the study team.

As with student records in general, it is reasonable to assume that the management of a project having the placement of students completing high school as a major objective would be aided by records of the numbers placed. Again, while to maintain such records does not imply sound management practices, the absence of such records does suggest managerial problems.

Twenty-three (23) projects reported that records were maintained relative to the placement of participating high school students. Two other projects indicated that placement records had been maintained but had been lost. Twenty-one (21) projects indicated that such records were not maintained. Nine of the twenty-one projects

indicating that the project did not maintain placement records did indicate, however, that the grantee maintained such records independent of the project. Four projects did not involve high school students and therefore did not need to maintain records concerning high school placement.

Wide variation was observed in the method by which placement records were generated, maintained, and used. Placement records per se were not generally available. In most areas placement activity was entered into each student's counseling record. The retrieval of this information frequently involved a search of each student's record and the generation of aggregate data.

Projects also varied considerably in their operational definition of the term "placement." For some projects placement was understood to mean the placement of a student an entry level job after graduation or during the summer. For others it meant placement in a work experience position, and for most it meant both. In some cases, placement records did not distinguish between positions secured through the assistance of the school as opposed to the initiative of the students; in other cases, notations were made of referrals to job openings rather than actual placement. These factors combined to produce data that were incomplete, vague, and incapable of comparison.

iii. Fiscal Control

As indicated in previous discussion, each Part D project received funds in order to perform activities which would produce student outcomes. It is generally accepted that an important aspect of project management is the monitoring of expenditures so as to insure that resources are being expended at the level and rate planned so that adjustments can be made where indicated and necessary. Clearly, in order to perform this critical management function it is necessary that project administrators have a record of expenditures and that this record be in a form which is useful from a program management point of view.

In the process of gathering data for the cost analysis of the Part D program (see Chapter X), the study team reviewed expenditure records. In addition, they sought either documentation or reasonable estimates from project staff which related expenditures to the major project activity categories. It was found that six projects were unable to provide expenditure data to the study teams. In addition, three projects were able to provide only partial expenditure data. Twelve projects were unable to provide estimates of project expenditures by activity areas. These included seven of the projects reporting partial or no expenditure data and five others.

It was found that expenditure data was not usually available from project sources. When seeking such information, the field teams were usually referred to one or more administrative offices or to a grantee fiscal section removed from the project. Project directors usually did not include a review of timely expenditure information in their normal monitoring processes. Regular reports of project expenses typically were not required by grantee boards or personnel outside the normal fiscal processes of an LEA.

Sound management requires monitoring present effort, comparing that effort to the planned effort, and making adjustments to correct any deficiencies. The findings in Chapters V and VI clearly imply that the management of project activities generally failed to make these kinds of adjustments and these findings with respect to fiscal management suggest that weakness in this area may provide at least part of the explanation.

iv. Personnel Job Descriptions

A commonly accepted indicator of sound management practices is the presence of job descriptions for salaried personnel which specify duties and responsibilities associated with each position. In the course of the field visits the study teams reviewed the job descriptions of the staff paid from Part D funds. Thirty-two projects were found to have written job descriptions and 18 either did not or were unable to provide them for review. Several projects were found to have excellent job descriptions in which duties were clearly stated, reporting lines defined, and objectives stated in specific terms. Many, however, did not have job descriptions written for the Part D projects. Frequently, the job descriptions reviewed were found to be general in nature and applicable to all personnel within the school system holding a particular position, rather than specifically related to the Part D project.

In summary, 19 of the 50 projects had favorable assessments with respect to three of the four indicators discussed above and seven projects were assessed favorably with respect to all four.

b. Project Evaluations

It was stipulated in the Federal Register that each project was to be evaluated. The USOE further stipulated that the evaluations were to be conducted annually by a third party and that a copy of the results of the evaluation was to be forwarded to USOE for review. The Part D projects were authorized to expend federal funds in order to employ a third party evaluator each year and were expected to utilize the results of the evaluations to improve project operations. A final report at the end of three years was also required.

As discussed in previous chapters, the evaluation reports on file with USOE in the summer of 1973 were systematically reviewed prior to the start of the field effort. Reports for 45 of the 50 projects were available for review, and a summary of that review is presented in Table 13 on the following page.

Although the study teams were not responsible for reviewing the evaluations in each site, in the course of gathering fiscal data they did determine whether or not evaluations were performed each year. It was found that Part D funds were expended for third party evaluations in the last two years in all 50 of the projects. Since all projects complied with the requirements for third party evaluations, this factor does not explain the variations in project activities.

TABLE 13
SUMMARY OF THIRD PARTY EVALUATIONS ON FILE WITH USOE
DURING JUNE AND JULY 1973

Date of most recent evaluation	Tested or surveyed students		Used standardized tests		Reviewed placement of students		Followed up graduates		Number of projects
	Yes	No	Yes	No	Yes	No	Yes	No	
1971	1	5	--	6	--	6	--	6	6
1972	9	9	6	12	2	16	2	16	18
1973	15	6	7	14	2	19	2	19	21
TOTAL*	25	20	13	32	4	41	4	41	45

* Five projects did not have evaluation reports on file with USOE; findings from the most current report are reported.

In the course of the visits the teams often reviewed evaluation reports which were not on file with USOE and discussed the utility of the evaluations with the project staff. Reports of these discussions suggest that the summary findings in Table 13 present a generally accurate picture of the evaluation effort during round one.

From the discussions with project staff it was concluded that in most cases the projects viewed the evaluations as a requirement of USOE rather than as a tool which was of assistance in project management. This is consistent with the previous findings regarding project management. Apparently, many evaluations neither assessed student outcomes nor contributed noticably to a sound plan of operation.

c. Linkage to Manpower Agencies

The Part D legislation, the Federal Register, and the USOE policy paper each indicates that projects should be designated to "...promote cooperation between public education and manpower agencies." The policy paper further indicates that the required placement function of each project should be accomplished in cooperation with appropriate employment services or manpower agencies. In the course of the field visits the study teams determined from project staff whether or not there were formal agreements between the projects and manpower agencies.

Fourteen projects reported formal relationships with such manpower agencies as the State Employment Service or the Vocational Rehabilitation Service. For the most part these relationships were found to originate from the mandated local manpower planning mechanisms emanating from provisions of the Comprehensive Employment and Training Act (CETA) and its predecessor, the Comprehensive Area Manpower Planning System (CAMPS). While all but one of the 14 projects reporting formal ties also reported placement activities, 21 projects without formal relationships to manpower agencies also engaged in placement activities.

In some of the projects not reporting formal relationships with a local manpower agency, the existence of informal ties was indicated. While no systematic effort was made to investigate the nature of the informational ties, typically these consisted of counselors contacting employment service offices regarding job openings for students. In this context, it is of interest to note that the guidance counselors surveyed were asked whether they were on loan to the project from another organization and, if so, from what type. Of the 229 responding counselors, only two were on loan and those were not from either state or local employment services.

d. Project Directors

It may be presumed that by definition the directors of Part D projects had substantial impact on the operations at the local level. In the course of the field visits the study teams obtained information indicating the extent of turnover during the life of the projects and salient background characteristics of the most recent project director. The background characteristics gathered relate to the provisions of the legislation and the Federal Register which indicated that project personnel should be qualified by virtue of unique and relevant experience. The Federal Register indicated that unique and relevant experience in lieu of formal degrees and certification could be considered in qualifying project personnel.

The following types of information regarding the background of project directors were gathered: (a) number of years of administrative experience, (b) number of years of vocational education experience, and (c) number of years employed by the grantee organization. In general, the project directors were employed by the grantee organization prior to the start of the Part D effort. Of 44 directors for whom information was available, 22 had been employed in the field of vocational education for five years or more and ten indicated over ten years of vocational education experience. Thirty of the project directors reported more than five years of administrative experience.

Most projects did not elect to use the selection of a director position as a method of building a bridge between school and the world of work. In addition, it is clear that projects were not aware of or did not choose to follow the suggestion contained in the legislation that exchange of personnel between the schools and manpower agencies and businesses be a part of the project design.

In terms of turnover of project directors, it was found that in 26 cases there was a single director, in 15 cases there were two directors, and in three cases there were three project directors during the course of the project. In six cases information was not reported. A comparison of the data pertaining to project directors with that regarding project activities does not reveal meaningful relationships.

e. Dissemination

The primary focus of this study was to evaluate the degree to which student outcomes attributable to project activities conformed to the legislative intent. In assessing the student outcomes produced by Part D projects it is reasonable to assume that if projects influenced other school systems, those school systems could also be producing desirable student outcomes. The USOE apparently took this "multiplier effect" into consideration when it indicated in the Federal Register that one criterion against which applications for Part D grants were to be judged was the inclusion of a dissemination plan.

The design for this study included provision for collecting information with which to assess the influence of the projects studied upon other schools or school systems. Data were sought from two sources, the grantee itself and the state education agency. Grantees were asked if they had a plan for disseminating the results of the project. Twelve projects indicated that they did not have a dissemination plan and 38 indicated they did have such a plan.

Next, projects were asked if their dissemination efforts were formal, that is to say, written. Of the 38 indicating a dissemination plan, 18 indicated that is was written and 20 indicated that it was not. This means that 24% of the projects did not have a dissemination plan and in 40% of the projects the plan was informal. It was not possible to validate the grantees' evaluation of these informal dissemination plans.

Typically, grantees reported that they responded to requests for technical assistance, information and materials, and advice. Several reported the publication of a project newsletter as a part of the dissemination plan and several reported attending conferences, etc., as a part of the plan.

Eighteen projects (36%) indicated they had established written dissemination plans. These plans included the development and distribution of career education materials, including movies, slides, and other audio-visual aids. Teacher training workshops and seminars were also a technique included in several of the formal plans.

In general, the projects having formal dissemination plans were active in disseminating results, materials, and other lessons learned as a result of project experience. Those projects having only informal plans, on the other hand, tended to be passive. In other words, they tended to respond to requests for assistance or materials rather than generate interest.

There were few records maintained describing the actual level of effort represented by dissemination activities. This made assessment of impact impossible within the time frame of this study. No meaningful relationships between the presence of a dissemination plan and project activities were found.

f. Continuation and Replication

The USOE policy paper governing the first round projects required grantees to make provision for carrying on the exemplary program with support from "regular" funding sources after Part D support had terminated. In 14 cases, grantees indicated that project activities had been or would be discontinued when Part D support ended. Another 19 grantees indicated that some aspects of the project would be continued but at a reduced level. In most cases the reduction was occurring due to a lack of sufficient funds from "regular" sources to maintain the Part D supported level of effort.

Of the remaining 17 projects, nine indicated that project activities were being continued at a level greater than that achieved with Part D support. In some cases this meant that the number of participants was increasing but not the level of program support. In other cases, the increase was attributable to the allocation of substantial local resources to continue or expand the exemplary program activities. The eight remaining grantees indicated that project activities would continue but did not foresee substantial change in the nature of the activities or the level of effort.

Grantees were also asked if they considered part or all of the Part D project suitable for replication. It was found that only three projects responded negatively. The 47 indicating that all or part of the project was suitable for replication were asked to indicate actual replicators of aspects of the program. Provision was made for up to six responses. Seventeen projects indicated six or more replicators of some aspect of project activity. Six indicated no replicators, and eight indicated that if

there were any replicators they were unknown to the project. No meaningful relationships between project continuation and replication data and project activities were found.

3. Organizational Characteristics

In addition to the nature of the stated objectives of the projects and the management practices they followed, variations in the basic nature of the organizations receiving Part D grants may help to explain variations in project activities. The Part D legislation permitted variety in the types of organizations or agencies permitted to operate Part D projects. The USOE was authorized to contract with LEAs, SEAs, and public or private, profit or non-profit agencies, organizations, or institutions for the establishment of Part D projects.

Given the permitted variations with regard to the type of Part D grantee and the explicit intent of building a bridge between school and the world of work, it would be reasonable to expect grants to be awarded to a variety of organizational types. In addition, it might be hypothesized that considerable emphasis would be given to grantees outside the traditional educational system; in other words, that construction of the bridge would not be limited to only one side of the chasm.

It was found, however, that Part D grants were awarded almost exclusively to educational agencies. Of the 50 projects visited, 31 (62%) were single school districts, four (8%) were educational service agencies sponsored by several school districts, ten (20%) were state education agencies, and three (6%) were institutions of higher learning. In total, 48 (96%) of the grants were made to educational agencies and two grants (4%) were made to other types of institutions. One of the two grants not made to an educational agency was awarded to a public foundation which subcontracted the major portion of the project activity to a single school district, and the other was awarded to a non-profit corporation which operated an experimental, alternative school system in an urban area.

In one sense, then, there was relatively little variation among the first round grantees. From an organization and management perspective, however, the important distinctions between grantees with and without a direct line responsibility for school administration was also explored. In 32 projects (64%), the grantee was directly responsible for project operations at the school level; that is, in the 31 projects administered by local school districts plus the alternative school system case, the Part D grantee had a direct line, supervisory relationship with the participating schools. In the remaining 18 projects (36%), the grantee had an indirect relationship with the participating schools through the local districts. At this level of aggregation, hypotheses suggesting that grantees which have direct, operating responsibility for the administration of schools will be more likely to produce the expected project activities than other grantees are not supported. A comparison of the two groups in terms of project activities (as reported in Table 9, Chapter VI) does not indicate meaningful differences in performance.

Examination of the relationship of management practices to organizational type produced mixed results. Of ten projects which were assessed as having implemented sound plans of operation, as well as having formal links to manpower agencies and third party evaluations, nine grantees were local school districts (the tenth was an SEA); of 40 projects assessed as having relatively weak management practices, in 22, or 55%, the grantee was a local school district. In general, while consistent participant information and expenditure data frequently was not readily available from grantees with an indirect

relationship to schools, it also frequently was not readily available from local school districts, especially from their project staff.

A review of the findings regarding expenditures, activities, and management indicators in terms of subcategories of grantees (e.g., LEAs, SEAs, service agencies, etc.), generally did not produce meaningful patterns. The clearest relationship identified between organizational type and any of the variables previously discussed pertains to stated project objectives and the absence of activities designed to reach these objectives. Earlier in this chapter it was noted that many projects stated objectives and subsequently did not initiate activities designed to reach those objectives. This phenomenon was noted in nine of the ten instances where an SEA was the grantee. This suggests that SEAs tended to overestimate the operational capabilities of education service delivery agencies. In other words, SEAs appeared to plan more than was possible with the limited resources. It also is possible that this may be explained in terms of the management structure, the implication here being that management adjustments are more difficult to make when the grantee is not directly responsible for program operations.

C. Conclusions

The findings reported in this chapter addressed three basic questions whose answers might explain the variations among projects with regard to expenditures and activities reported earlier. The first of these questions was: Did USOE fund projects which were expected to produce the Part D activities called for by the legislation and policy paper? A review of stated objectives in project proposals and reports indicates that while most projects did have the activities specified in the policy paper among their objectives, there were exceptions. Although many projects included objectives which were in neither the legislation nor the policy paper, none of the projects included among their objectives those activities addressed in the legislation but not addressed by the policy paper.

It should be noted that there were several instances of projects performing activities which were not included among their project objectives. Often this may be explained by the presence of objectives which were too general to categorize. In addition, based on discussion with project staff and confirmed by USOE program staff, in some cases this was the result of USOE efforts to persuade projects to undertake these activities. As indicated in Table 11, page 52, however, in no case does the number of projects with a mandated activity included among their stated objectives plus those who actually produced the activity equal all of the 50 projects. Also, as indicated in Table 11, with the exception of "elementary and secondary familiarization" activities, a considerable number of projects did not perform activities included among their objectives.

The second basic question addressed was: Did projects comply with management practices addressed by federal policy, and what is the relationship between these practices and engaging in the federally expected Part D activities? Data were reported with respect to six areas of management practice specifically addressed in federal policy statements.

Typically, projects indicated compliance with some but not all of the management practices reviewed. Of the 50 projects, ten were judged to have a sound plan of operation (based on positive responses to three of four indicators), established formal links to manpower agencies, and implemented third party evaluations for at least two program years. Of these ten projects, five implemented all of the activities specified in the USOE policy paper which were included in their set of local project objectives; of these five projects, three included all of the federal policy paper objectives among their own.

Analysis of the data collected with respect to project plans and efforts to disseminate information to other school districts was not meaningfully related to the type of project activities in which they engaged. This was also true with respect to data regarding project continuation or to indications of the replication of project activities in other school districts.

The third basic question addressed was: Does the nature of the Part D grantee relate to either the management practices followed or the nature of the activities produced? In general, a comparison of the various types of grantees with the assessment of project activities and management practices did not produce meaningful results.

In summary, the findings in this chapter indicate considerable variability in both project objectives and management practices, and that these variations do not closely correspond to the variations among projects with respect to expected activities. In Chapter V it was concluded that the federal inputs did not occur as planned as indicated by project underexpenditures. From this finding it would be logical to predict that the planned federal activity objectives would not be reached. In Chapter VI this was indeed found to be the case.

In general, based upon the findings presented thus far, one would not expect the planned student outcomes to have occurred, at least on a uniform basis. In Chapter VIII, which follows, the student level outcomes of the first round Part D programs are presented.

CHAPTER VIII: STUDENT OUTCOMES

A. Introduction

The objective of the Part D program was to produce student outcomes as a result of program activities which were consistent with the legislative goal of reducing youth unemployment. While the Part D legislation and associated federal policy specified a set of broad program activities (see Chapter VI), the most explicit statements with regard to student outcomes of the Part D projects were:

- that elementary and secondary students were to be familiar with the broad range of occupations and the requisites for careers in these occupations (legislation);
- that secondary school students were to be motivated and prepared for careers as teachers of vocational education (legislation);
- that students not enrolled in vocational education programs were to receive job entry skills just prior to graduation (policy paper); and
- that all students would be placed in a job or in post-secondary occupational training at the completion of their schooling (policy paper).

Beyond these four statements, the student level objectives of the Part D projects were not formally defined during the first three years of the program. Officially, within the broad purpose of the legislation and USOE policy statements, each project was free to specify its own set of outcomes. During the course of the first round activities, however, a set of more explicit expectations regarding student outcomes emerged and gained acceptance across most of the locally operated Part D projects. These expected student outcomes generally may be traced to the report of the Advisory Council on Vocational Education (1968) which led to establishing the Part D program and to related conceptual and innovative efforts in education. *

The findings with regard to student outcomes discussed below are, for the most part, based on the set of informally specified but generally shared expectations which guided the first round efforts. The set of research questions and hypotheses to which the findings relate were formulated in the fall of 1973. They are the result of a process which involved the active participation of the study team, Part D program staff, and evaluation staff from USOE. Each participant in the process was involved in formulating the outcome statements and approved the final set.

As indicated in Chapter III, the set of student outcomes selected for investigation was not intended to be exhaustive of the outcomes produced by the Part D projects. Rather, they were considered reasonable indicators of the extent to which federal program objectives were attained.

It was expected from the outset that not all projects would succeed in achieving each of the expected outcomes. USOE program staff were aware that projects varied both in emphasis and in the techniques they employed. The findings reported in previous chapters with respect to project expenditures and activities also clearly lead to the expectation that projects would vary in terms of the student outcomes produced.

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* See Chapter II.

B. Findings

As indicated above, at the start of the study a set of research questions was developed jointly by Development Associates and USOE. It was understood that the answers to these questions would provide an assessment of the performance of the Part D program during its first years in terms of student outcomes as they relate to the national objectives. As will be noted in the context of the subsections below, the analysis of the data obtained during the field effort resulted in the modification of a few of these questions. The specific findings below are organized in terms of the study questions and are based on the responses of randomly selected students and, in one case, teachers, following the procedures described in Chapter IV.

For each study question, the findings are presented both in terms of the number of projects in which there were or were not positive findings when comparing participants and non-participants, and in terms of the differences between participants and non-participants across all projects. (It will be noted that at the 12th grade level, the Work Experience Group and the Job Entry Skill Training Group showed fewer positive outcomes than did the Participating Teacher Group, and that there are several instances in which the Skill Training Group had less positive scores than its control group. We believe that these findings reflect selection factors, since the questionnaire data indicate that only 26% of the Skill Training Participants and 29% of the Work Experience Participants said that they planned to go to college, in comparison with 48% of the Participating Teacher Participants, 49% of the control group used for the Skill Training component, and 46% of the control group used for the Participating Teacher component. The special control group used for the Work Experience component -- students in other cooperative education programs -- contained 38% who said they planned to go to college. These data strongly suggest that the participating students in the Work Experience group and in the Skill Training group differed from the other students in their prior academic orientation.)

Question 1: Are student participants able to identify a greater number of occupations than non-participants?

Criteria

While it was judged that participants in the Part D program should be able to identify a greater number of occupations than non-participants, upon reflection it was decided that it would also be important to determine whether participants were also aware of a greater variety of occupations. As a result, two criterion variables were used to answer the above question.

1a. Absolute number of occupations:

Each student was asked to "write the names of as many jobs or occupations as you can think of" on a page consisting of two columns of 24 blank lines in each column. For this criterion the scoring was in terms of the number of items listed which could be assigned a code number from the Dictionary of Occupational Titles (DOT). A t-test was used to determine whether a statistically significant difference existed between the means of the two groups, i.e., participants and non-participants, for each student group, on both an overall and a project-by-project basis. For each test the null hypothesis was: $Ho: \mu_p = \mu_{np}$; that is, no difference exists between the mean score of the participant and non-participant group. The probability of falsely rejecting this hypothesis was set at the 5% level (i.e., $\alpha = .05$). Values at the 1% level were also noted.

1b. Variety of Occupations:

The responses to the questions yielding an indication of the number of occupations were also analyzed to provide an indication of the variety of occupations reported by each student. Coding was in terms of the number of different two-digit DOT codes contained in each student's response. For example, while a student who listed all nine positions on a baseball team would have received a score of "9" in terms of the absolute number of occupations listed, he would receive a score of "1" in terms of variety. As with the first criterion, a t-test was used to determine whether there was a significant difference between the two groups in each project and across all projects.

Results

Table 14, page 66, shows that 6th grade participants, in 15 of the 45 projects surveyed (33%), named significantly more occupations than did non-participants. Similarly, participants in 13 projects (29%) named a significantly greater variety of occupations than non-participants.

Ninth grade participants in 11 of 42 projects (26%) named significantly more occupations and a significantly greater variety of occupations than did non-participants.

Participating Teacher (12th grade) group participants in 9 of the 23 projects (39%) named significantly more occupations while participants in 8 of 23 projects (35%) named a significantly greater variety of occupations than non-participants.

Counseling (12th grade) group participants in two of the four projects were able to name significantly more occupations and a significantly greater variety of occupations than were non-participants.

Work Experience (12th grade) group participants in 3 of the 19 projects (16%) were able to name significantly more occupations and a significantly greater variety of occupations than non-participants.

Finally, Skill Training (12th grade) group participants in 3 of the 14 projects (21%) named significantly more occupations and a significantly greater variety of occupations than non-participants.

Generally, in projects where participants named a significantly higher number of occupations than non-participants, they also identified a significantly greater variety of occupations. Only three exceptions were found where participants scored significantly higher in one variable but not the other.

As shown in Table 15, comparisons were made across all projects for each group. Participants exhibited significantly higher scores on both variables than did non-participants in the 6th grade group, the 9th grade group, and both 12th grade groups which had occupational familiarization activities infused into the curriculum (Participating Teacher and Counselor). For the Work Experience and Skill Training groups, the non-participants scored significantly higher than the participants on both variables.

TABLE 14

Number of Projects Where Participating Students were Able to Identify a Greater Number and Variety of Occupations than Non-Participants.

Student Groups / Type of Difference Found	6th Grade		9th Grade		12th Grade Students: Work Experience Group		Skill Training Group		Participating Teacher Group		Counseling Group	
	Criterion		Criterion		Criterion		Criterion		Criterion		Criterion	
	1a	1b	1a	1b	1a	1b	1a	1b	1a	1b	1a	1b
Number of projects where participants were able to identify a significantly greater number at the .01 level.	12	11	7	9	3	3	3	3	8	8	2	2
Percent	24		16	21	16	16	21	21	35	35	50	50
Number of projects where participants were able to identify a significantly greater number at the .05 level.	3	2	4	2	0	0	0	0	1	0	0	0
Percent	7	4	10	5	0	0	0	0	4	0	0	0
Number of projects where participants were not able to identify a significantly greater number.	30	32	31	31	16	16	11	11	14	15	2	2
Percent	67	71	74	74	84	84	79	79	61	65	50	50
Total with Significance.	15 (33%)	13 (29%)	11 (26%)	11 (26%)	3 (16%)	3 (16%)	3 (21%)	3 (21%)	9 (39%)	8 (35%)	2 (50%)	2 (50%)
Total Projects Tested	45	45	42	42	19	19	14	14	23	23	4	4

1a = number of occupations

1b = variety of occupations

TABLE 15

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for Question 1: "Are student participants able to identify a greater number of occupations than non-participants?"

Student Groups / Outcome Variable	6th Grade		9th Grade		12th Grade Students							
					Work Experience Group		Skill Training Group		Participating Teacher Group		Comparison Group	
	P	NP	P	NP	P	NP	P	NP	P	NP	P	NP
Absolute No. of Occupations:												
N	1,377	1,333	1,294	1,307	448	474	425	441	714	712	156	151
Mean	15.51	14.05	20.27	19.07	19.84	22.28	18.22	20.08	22.59	19.91	27.04	22.52
Standard Deviation	9.05	8.94	13.53	12.79	12.67	14.52	12.53	14.66	13.66	13.17	14.73	15.06
Significance	**		*		(**)		(*)		**		**	
Variety of occupations:												
N	1,379	1,335	1,294	1,307	448	474	426	442	714	712	156	150
Mean	9.62	8.73	12.53	11.80	12.26	13.36	11.05	12.24	13.72	12.29	15.59	13.60
Standard Deviation	4.72	4.75	7.06	6.95	6.64	7.48	6.48	7.49	7.39	6.81	7.88	7.61
Significance	**		**		(*)		(*)		**		*	

KEY:

* = significant at .05 level of confidence.
** = significant at .01 level of confidence.
ns = not significant.
(*, **) = non-participants scored significantly higher (see p. 64 for discussion)

Conclusion:

Comparing results across all projects reveals that participants scored significantly better than non-participants for all groups except Work Experience and Skill Training on both criteria. Although the differences between the groups were statistically significant, the differences were small except in the instance of the Counselor group with respect to the number of occupations named. On a project-by-project basis it must be concluded that in a majority of the projects, participants were not able to identify a greater number or a greater variety of occupations than non-participants.

Question 2: Do students demonstrate more familiarity with tasks and functions associated with selected occupations than the comparison group?

Criterion

Each student was asked to complete Part 2: Knowing About Jobs of the Career Maturity Inventory. Each of the 20 items in this sub-test begins with a brief description of a job performed by a person. Following the description are four occupational titles. Students are asked to select the occupation corresponding to the job description or to indicate that they "don't know." Scoring was in terms of number right as a percentage of the number attempted; if fewer than half were attempted the student was treated as a non-respondent. A t-test was used to determine whether a significant difference existed between the means of the two groups, i.e., participants and non-participants, for each student group on a project-by-project basis. For each test the null hypothesis was: Ho: $\mu_p = \mu_{np}$; that is, no difference exists between the mean score of the participant and non-participant group. The probability of falsely rejecting this hypothesis was set at the 5% level ($\alpha = .05$). Values at the 1% level were also noted.

Results

As shown in Table 16, sixth grade participants in nine of the projects (20%) scored higher than non-participants. Ninth grade participants in 11 of the projects (26%) scored significantly higher than non-participants. Participants in only one project in each of the 12th grade groups scored significantly higher than non-participants. Table 17 shows the comparisons of participants and non-participants over all projects. Participants scored significantly higher than non-participants in the 9th grade, Participating Teacher (12th grade), and Counseling (12th grade) groups. No differences were found in the 6th grade groups. Non-participants scored significantly higher than participants in the Skill Training (12th grade) group, while no difference was detected in the Work Experience group.

Conclusion

The area of greatest program impact with respect to this outcome appears to have been at the 9th grade level where participating students scored significantly higher than non-participants in 26 % of the 42 projects, and across all projects. While on an across-project basis participants in three of the six student groups scored higher than non-participants, in a majority of projects participants did not have significantly higher scores. Overall, it is concluded that participants did not demonstrate more familiarity with selected occupations than non-participants.

TABLE 16

Number of Projects Where Participating Students Were More Familiar with Tasks and Functions Than Were Non-Participants

Type of difference found \ Student Group	6th Grade	9th Grade	12th Grade Students			
			Work Experience Group	Skill Training Group	Investigating Technical Occupations	Control Group
Number of projects where participants were significantly more familiar at the .01 level	7	7	1	1	1	1
Percent	16	17	5	7	4	25
Number of projects where participants were significantly more familiar at the .05 level	2	4	0	0	0	0
Percent	4	10	0	0	0	0
Number of projects where participants were not significantly more familiar.	36	31	18	13	22	3
Percent	80	74	95	93	96	75
Total with Significance	9 (20%)	11 (26%)	1 (5%)	1 (7%)	1 (4%)	1 (25%)
Total projects tested	45	42	19	14	23	4

TABLE 17

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for Question 2:
"Do students demonstrate more familiarity with tasks and functions associated with selected occupations than the comparison group?"

Outcome Variable / Student Groups	6th Grade		9th Grade		12th Grade Students							
					Work Experience Group		Skill Training Group		Participating Teacher Group		Counseling Group	
	P	NP	P	NP	P	NP	P	NP	P	NP	P	NP
Part 2: Knowing About Jobs, CMI												
N	1,381	1,344	1,336	1,347	454	479	457	458	729	730	160	159
Mean	52.09	50.94	63.21	61.21	75.19	75.28	69.59	74.06	79.44	76.74	80.81	75.76
Standard Deviation	19.38	19.60	23.25	23.11	20.49	21.52	22.94	23.26	18.76	21.23	18.17	23.75
Significance	ns		*		ns		(--)		*		*	

KEY:

* = significant at .05 level of confidence

ns = not significant

(- --) = non-participants scored significantly higher (p. 64 for discussion).

Question 3: Are student participants more familiar with the requisites associated with employment in selected occupations than the comparison group?

Criteria

Two sub-scales of the Career Maturity Inventory (CMI) were used in answering this question. While they are the best measures relative to this question which could be found, it must be noted that both were designed to measure more than simple familiarity with the requisites associated with selected occupations.

The first sub-scale was specifically developed to assess a student's ability to "match up" psychosocial characteristics with those required in selected occupations. The second was specifically developed to assess a student's competency in utilizing specific knowledge of career requisites in planning.

3a. Each student was asked to complete Part 3: Choosing a Job of the CMI:

In each of the 20 items in this sub-test students are given a description of a person, followed by four occupational titles. Students are asked to read the description of each person and then select the occupation they think is the "best" one for that person or to indicate they "don't know." Scoring for this and all other sub-scales of the CMI was as described for Question 2. A t-test was used to determine whether a significant difference existed between the means of the two groups, i.e., participants and non-participants, for each student group on a project-by-project basis and across all projects. For each test the null hypothesis was: Ho: $\mu_p = \mu_{np}$; that is, no difference exists between the mean score of the participant and non-participant group. The probability of falsely rejecting this hypothesis was set at the 5% level ($\alpha = .05$). Values at the 1% level were also noted.

3b. Each student was asked to complete Part 4: Looking Ahead of the CMI:

In each of the 20 items in this sub-test students were given an occupational title and three steps that a person could complete to prepare for and enter this occupation. Students were then given four ways in which these steps could be ordered. Each student was asked to read the occupational title and the steps and then select the correct order for completing the three steps, or to indicate "don't know."

As with the first criterion, a t-test was employed to determine if a significant difference existed between participants and non-participants on a project-by-project basis and across all projects. The null hypothesis was: Ho: $\mu_p = \mu_{np}$ for each project and across all projects. Again α was set at the .05 level.

Results

As indicated in Table 18, participants in seven projects (16%) at the sixth grade level had significantly higher mean scores on the Choosing a Job sub-test. On the sub-test Looking Ahead, sixth grade participants in 11 projects (24%) had significantly higher mean scores than their comparison groups.

At the ninth grade, participants in 10 projects (24%) on the Choosing a Job sub-test and in six projects (14%) on the Looking Ahead sub-test obtained significantly higher mean scores.

TABLE 18

Number of Projects Where Participating Students Were More Familiar With Job Requisites Than Were Non-Participants

Student Group / Type of Difference found	6th Grade		9th Grade		12th Grade Students: Work Experience Group		Skill Training Group		Participating Teacher Group		Counseling Group	
	Criterion		Criterion		Criterion		Criterion		Criterion		Criterion	
	3a	3b	3a	3b	3a	3b	3a	3b	3a	3b	3a	3b
Number of projects where participants were significantly more familiar at the .01 level.	5	5	6	5	4	2	1	0	1	3	1	1
Percent	11	11	14	12	21	11	7	0	4	13	25	25
Number of projects where participants were significantly more familiar at the .05 level.	2	6	4	1	0	0	0	0	2	1	0	0
Percent	4	13	10	2	0	0	0	0	0	4	0	0
Number of projects where participants were not significantly more familiar.	38	34	32	36	15	17	13	14	20	19	3	3
Percent	85	76	76	86	79	89	93	100	87	83	75	75
Total with Significance	7 (16%)	11 (24%)	10 (24%)	6 (14%)	4 (21%)	2 (11%)	1 (7%)	0	3 (13%)	4 (17%)	1 (25%)	1 (25%)
Total Projects Tested	45	45	42	42	19	19	14	14	23	23	4	4

3a = CMI, Choosing a Job (Part 3)

3b = CMI, Looking Ahead (Part 4)

TABLE 19

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for Question 3:

"Are student participants more familiar with the requisites associated with employment in selected occupations than the comparison group?"

Student Groups / Outcome Variables	8th Grade		9th Grade		12th Grade Students							
					Work Experience Group		Skill Training Group		Part-Time Employment Group		Combination Group	
	P	NP	P	NP	P	NP	P	NP	P	NP	P	NP
Part 3: Choosing a Job, CMI												
N	1,365	1,339	1,285	1,317	448	479	451	452	727	724	160	158
Mean	42.15	40.85	51.53	49.97	61.38	60.81	56.33	62.42	64.65	62.75	64.42	62.65
Standard Deviation	16.15	16.84	20.54	20.02	20.24	21.18	20.83	20.73	18.35	19.58	18.61	20.16
Significance	*		ns		ns		(**)		ns		ns	
Part 4: Looking Ahead, CMI												
N	1,257	1,246	1,242	1,276	444	473	448	448	720	715	160	156
Mean	42.62	40.49	52.24	50.73	57.46	60.32	54.16	61.44	64.43	62.42	66.72	62.38
Standard Deviation	20.31	20.37	23.48	23.47	23.07	23.63	24.01	24.07	20.74	22.80	21.60	24.37
Significance	**		ns		ns		(**)		ns		ns	

KEY: * = significant at .05 level of confidence.

** = significant at .01 level of confidence

ns = not significant

(* **) = non-participants scored significantly higher (see p. 64 for discussion)

At the 12th grade level, participants in the Participating Teacher groups scored higher than non-participants in three projects (13%) on Choosing a Job and in four projects (17%) on Looking Ahead; participants in the Counseling group scored higher than non-participants in one project (25%) on both sub-tests; participants in the Work Experience group scored nigher than non-participants in four projects (21%) on Choosing a Job, and in two projects (11%) on Looking Ahead; and participants in the Skill Training group scored higher in one project (7%) on Choosing a Job and in no projects on Looking Ahead. As indicated on Table 19, when comparisons were made across all projects, participants were found to have significantly higher mean scores in only the 6th grade group.

Conclusion

In comparing participants to non-participants across all projects it is concluded that only at the 6th grade level did the participants score significantly higher on the sub-tests than non-participants. However, this was found to be true in only seven of forty-five projects (16%) for one criterion and 11 of 45 for the second (24%). In general, then, it must be concluded than participants were not more familiar with the requisites associated with employment in selected occupations than non-participants.

Question 4: Do student participants score higher on pre-vocational, job readiness tests than non-participants?

Criteria

No standardized instruments relative to this question were identified. As a result, two sets of questionnaire items were developed. During the pre-test site visits, students at each grade level were asked to complete the items and discuss them with a member of the study team. The items were also reviewed for face validity by staff of Part D projects during the field test visits and by individuals with extensive experience in the field of job training and placement.

4a. The first set of items, designated Job Readiness: Knowledge, was designed to assess information pertaining to the world of work which indicated job readiness. Twenty factual statements to be checked as either "true" or "false" (Questions 10 through 29 of the Student Questionnaire) were asked of each student. The test was scored by giving one point for each correct answer and summing the points. A t-test was used to determine whether a significant difference existed between the means of the two groups, i.e., participants and non-participants, for each group on a project-by-project basis and across all projects. For each test the null hypothesis was: Ho $\mu_p = \mu_{np}$: that is, no difference exists between the mean score of the participant and non-participant group. The probability of falsely rejecting this hypothesis was set at the 5% level (i.e., $\alpha = .05$). Values at the 1% level were also noted.

4b. The second set of items, designated Job Readiness: Attitudes, consisted of seven statements pertaining to various preferences and attitudes concerning work and career planning (Questions 30 through 36 of the Student Questionnaire). The test was scored by means of a five-point agreement scale, with the scale reversed for items in which disagreement was the more favorable response. The score for each of the items was then summed for a total score. As with the first criterion, a t-test was employed to determine the difference between the participating and non-participating groups on a project-by-project basis and across all projects.

Results

Job Readiness: Knowledge

The results for this and the second criterion are shown in Tables 20 and 21. At the sixth grade level, participants in 8 of 45 projects (18%) scored significantly higher than non-participants. Participants in the 9th grade in 7 of 42 projects (17%) scored significantly higher than non-participants. At the 12th grade level, participants in only one project in each of the Participating Teacher and Counseling groups scored significantly higher than non-participants. In the Work Experience group, participants in only one project scored significantly higher than non-participants, while no significant differences were found in the Skill Training group. On an overall basis, significant differences were found only in the 6th grade group and these differences were, in a practical sense, very small. No differences were found in any of the other groups.

Job Readiness: Attitude

As shown in Table 20, participants in four projects in each of the 6th and 9th grade groups had significantly higher means than non-participants. At the 12th grade level, participants in three projects (13%) in the Participating Teacher group and one project (25%) in the Counseling group had significantly higher means than non-participants. In the Work Experience and Skill Training groups, participants scored significantly higher in one project (5%) and no projects, respectively. On an overall basis, significant differences were found between participants and non-participants at the 6th grade level and in the Skill Training group; in a practical sense, however, these differences were very small. No differences were found in the other groups.

Conclusion

On both an across-all-projects basis and on a within-projects basis, some statistically significant results were found. The greatest area of impact appears to have been at the sixth grade level where a significant difference between participants and non-participants was found overall and on one or the other of the criteria in 22% (10) of the projects. Given the small number of projects in which differences were found plus the lack of significant differences overall in grades 9 and 12, it must be concluded that, in general, the results do not indicate that participants are able to score higher than non-participants on pre-vocational, job readiness tests. This conclusion must be tempered, however, with the observation that the scores of all students, at all levels, were quite high in most projects.

TABLE 20

Number of Projects Where Participating Students Scored Higher on Pre-Vocational, Job Readiness Tests Than Did Non-Participants

Student Group / Type of Difference Found	6th Grade		9th Grade		12th Grade Students							
					Work Experience Group		Skill Training Group		Participating Teacher Group		Counseling Group	
	Criterion		Criterion		Criterion		Criterion		Criterion		Criterion	
	4a	4b	4a	4b	4a	4b	4a	4b	4a	4b	4a	4b
Number of projects where participating students scored significantly higher at the .01 level	5	1	3	3	1	1	0	0	0	3	1	1
Percent	11	2	7	7	5	5	0	0	0	13	25	25
Number of projects where participating students scored significantly higher at the .05 level	3	3	4	1	0	1	0	0	1	0	0	0
Percent	7	7	10	2	0	5	0	0	4	0	0	0
Number of projects where participants did not score significantly higher	37	41	35	38	18	17	14	14	22	20	3	3
Percent	82	91	83	90	95	89	100	100	96	87	75	75
Total with Significance	8 (18%)	4 (9%)	7 (17%)	4 (10%)	1 (5%)	2 (11%)	0	0	1 (4%)	3 (13%)	1(25%)	1 (25%)
Total Projects Tested	45	45	42	42	19	19	14	14	23	23	4	4

4a = Job Readiness: Knowledge

4b = Job Readiness: Attitudes

TABLE 21

Comparison Between Participants (P) and Non-Participants (NP), by Student Group Across all Projects for Question 4:
"Do student participants score higher on pre-vocational, job readiness tests than the comparison group?"

Student Groups / Outcome Variables	8th Grade		9th Grade		12th Grade Students							
					Work Experience Group		Skill Training Group		Participating Teacher Group		Counselling Group	
	P	NP	P	NP	P	NP	P	NP	P	NP	P	NP
Knowledge:												
N	1,392	1,379	1,348	1,367	464	494	465	463	737	733	160	159
Mean	15.02	14.80	16.38	16.33	17.63	17.72	17.36	17.58	17.65	17.73	17.93	17.94
Standard Deviation	2.06	2.17	2.16	2.06	1.89	1.73	1.92	1.92	1.86	1.72	1.64	1.68
Significance	**		ns		ns		ns		ns		ns	
Attitude:												
N	1,392	1,379	1,348	1,367	464	494	465	463	737	733	140	159
Mean	23.36	22.99	25.02	24.87	25.87	26.01	25.31	25.96	26.57	26.28	26.45	26.19
Standard Deviation	3.81	4.09	3.84	3.77	3.67	3.37	3.79	3.57	3.52	3.40	3.04	3.46
Significance	*		ns		ns		(**)		ns		ns	

KEY:

* = significant at .05 level of confidence

** = significant at .01 level of confidence.

ns = not significant.

(* **)= non-participants scored significantly higher (see p. 64 for discussion)

Question 5: Do student participants indicate more positive attitudes toward employment than non-participants?

Criterion

The Attitude Scale of the Career Maturity Inventory was used as the indicator of positive attitudes toward employment. The Attitude Scale consists of 50 statements pertaining to individual "attitudes and feelings toward making a career choice and entering the world of work." Each student was asked to indicate whether he agreed or disagreed with each statement. As with the other sub-scales of the CMI, scoring was in terms of percentage right, if more than half of the items were attempted; if fewer than half were attempted, the student was treated as a non-respondent. A t-test was used to determine whether a significant difference existed between the means of the two groups, i.e., participants and non-participants, for each student group on a project-by-project basis and across all projects. For each test the null hypothesis was: Ho: $\mu_p = \mu_{np}$; that is, no difference exists between the mean score of the two groups. The probability of falsely rejecting this hypothesis was set at the 5% level ($\alpha = .05$). Values at the 1% level were also noted.

Results

Table 22 shows that at the sixth grade level participants in 11 projects (24%) had significantly higher mean scores than non-participants. At the ninth grade level, participants scored significantly higher than non-participants in six projects (14%). At the 12th grade level, Participating Teacher and Counseling group participants in three projects (13%) and one project (25%), respectively, had significantly higher means than non-participants. Participants in two projects (11%) in the Work Experience group had significantly higher mean scores than the non-participants; no differences were detected in the Skill Training group. Table 23 shows the results when the comparisons are made over all projects. Significant differences were found at the sixth grade level and in the Participating Teacher group. No differences were found in the other groups.

Conclusion

Comparing participants to non-participants across projects, it is found that sixth grade and Participating Teacher group participants indicated a more positive attitude toward employment than non-participants. On a project-by-project basis, however, participants in a majority of the projects did not indicate a more positive attitude toward employment than non-participants. Taking the within- and across-project comparisons together, it is concluded that in general, participants did not have more positive attitudes toward employment than non-participants.

TABLE 22

Number of Projects Where Participating Students Had More Positive Attitudes Toward Employment Than Did Non-Participants

Type of Difference Found \ Student Group	8th Grade	9th Grade	12th Grade Students			
			Work Experience Group	Skill Training Group	Both Training Groups	Counseling Group
Number of projects where participating students had significantly more positive attitudes at the .01 level	5	3	1	0	3	1
Percent	11	7	5	0	13	25
Number of projects where participating students had significantly more positive attitudes at the .05 level	6	3	1	0	0	0
Percent	13	7	5	0	0	0
Number of projects where participating students did not have significantly more positive attitudes	34	36	17	14	20	3
Percent	76	86	89	100	87	75
Total with Significance	11 (24%)	6 (14%)	2 (11%)	0	3 (13%)	1 (25%)
Total Projects Tested	45	42	19	14	23	4

TABLE 23

Comparison Between Participants (P) and Non-Participants (NP) by Student Group Across all Projects for Question 5: "Do participants indicate more positive attitudes toward employment than non-participants?"

Student Groups / Outcome Variables	6th Grade		9th Grade		12th Grade Students							
					Work Experience Group		Skill Training Group		Participating Teacher Group		Counseling Group	
	P	NP	P	NP	P	NP	P	NP	P	NP	P	NP
Attitude Scale, CMI												
N	1,392	1,379	1,348	1,367	464	494	465	463	737	733	160	159
Mean	55.13	53.23	63.09	62.87	69.23	69.40	67.69	69.00	70.89	69.61	71.48	70.83
Standard Deviation	12.39	12.89	12.63	12.60	12.91	12.31	11.85	12.07	12.05	11.76	12.91	10.91
Significance			ns		ns		ns		**		ns	

KEY: ** = significant at .01 level of confidence

ns = not significant

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Question 6: Is the variety of careers being considered by individual participating students greater than that of non-participants?

Criterion

Each student was asked to respond to the question: "What are all the different kinds of work you might like to do when you grow up?" This was question #9 of the student questionnaire. Responses were coded to reflect the number of different two-digit DOT* job codes included in each student's response. The categories used for analysis were 1, 2, 3, 4, and 5 or more different two-digit DOT codes. Results were analyzed using the chi-square test.

Results

Participants indicated a greater variety of careers than non-participants in four projects at the sixth grade level, one project at the ninth grade level, and one project each for the Participating Teacher group and Work Experience group. As shown in Table 24, when comparisons were made across all projects, no difference between participants and non-participants were found except in the Counseling group where participating students cited a smaller variety of career choices than the non-participants. This suggests that one of the effects of counseling for this group may be to narrow the career choices of the participants. Overall, less than 50% of each group cited more than two different DOT codes.

Conclusion

It must be concluded that participants are not considering a greater variety of careers than are non-participants.

Question 7: Do student participants indicate more positive attitudes toward guidance and counseling than non-participants?

Criteria

All 9th and 12th grade students were asked whether they would like to meet with their counselor more often (Student Question # 48). In addition, those who indicated that a counselor had talked to them individually about their future work were asked if this had been helpful to them (Student Question #43a), and those who indicated that a counselor had talked to them individually about how to prepare for their future were asked if this had been helpful to them (Student Question #44a). Twelfth grade students were asked three additional specific questions in the same vein, dealing with helpfulness of a counselor having talked to them about getting a job, applying to college, or getting vocational or technical training (Student Question #50). All of the items call for No/Yes responses. Comparisons were made between participants and non-participants by means of chi-square, using the 5% level of confidence for rejecting the null hypothesis of no difference.

Results

The results for all six variables are shown in Table 25. No significant differences were found across all projects between participants and non-participants on any of the variables. Within the 12th grade groups, between 49% and 61% of the participants indicated that they want more frequent contact with counselors; between 71% and 83% of the participants and non-participants said that it had been helpful to talk to their counselors about the future; between 84% and 94% said it had been helpful to talk to their counselors about preparing for future work; between 74% and 87% said it had been helpful to talk to their counselors about getting a job;

*Dictionary of Occupational Titles.

TABLE 24

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects for Q 6:
"Is the variety of careers being considered by individual participating students greater than that of students in the comparison group?"

Student Groups / Outcome Variable	8th Grade				9th Grade				12th Grade Students															
									Work Experience Group				Skill Training Group				Participating Teacher Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Variety of Career Choices:																								
1	338	24.8	305	24.9	203	15.9	219	18.1	89	18.5	91	22.6	100	25.9	101	21.2	144	21.3	150	20.7	20	20.8	48	23.9
2	452	33.2	393	32.1	447	35.0	389	32.2	176	36.6	131	32.5	136	35.2	148	31.0	227	33.6	228	31.5	36	37.5	75	37.3
3	351	25.8	282	23.0	338	26.5	348	28.8	130	27.0	100	24.8	92	23.8	129	27.0	173	25.6	204	28.2	30	31.3	36	17.9
4	142	10.4	148	12.1	174	13.6	152	12.6	59	12.3	49	12.2	34	8.8	60	12.6	79	11.7	82	11.3	7	7.3	26	12.9
5 or more	79	5.8	98	8.0	115	9.0	101	8.4	27	5.6	32	7.9	24	6.2	39	8.2	52	7.7	59	8.2	3	3.1	16	8.0
Totals	1,362	100.0	1,226	100	1,277	100.0	1,209	100	481	100.0	403	100.0	386	100.0	477	100	675	100.0	723	100	96	100.0	201	100.0
Significance	ns				ns				ns				ns				ns				*			

* = Significant at the .05 level of confidence. ns = Not significant.

TABLE 25

Comparison Between Participants (P) and Non-Participants, by Student Groups, Across all Projects, for Q. 7:
"Do student participants indicate more positive attitudes toward guidance and counseling than non-participants?"

Outcome Variables \ Student Groups	6th Grade				9th Grade				12th Grade Students: Work Experience Group				12th Grade Students: Skill Training Group				12th Grade Students: Participating Teacher Group				12th Grade Students: Counseling Group			
	P		NP		P		NP		P		NP		P		NP		P		NP		P			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Want more frequent contact with counselor: NO					493	39.4	432	39.8	226	48.6	217	50.8	190	49.5	203	46.8	287	45.3	335	47.7	51	54.3	94	50.5
YES					759	60.6	654	60.2	239	51.4	210	49.2	194	50.5	231	53.2	347	54.7	367	52.3	43	45.7	92	49.5
Totals					1,252	100	1086	100	465	100	427	100	384	100	434	100	634	100	702	100	94	100	186	100
Significance					ns				ns				ns				ns				ns			
Counselor talks about future work helpful: NO					88	19.0	72	19.1	68	25.4	82	28.1	40	21.2	69	26.5	68	17.0	87	19.9	13	20.0	34	28.6
YES					374	81.0	305	80.9	200	74.6	210	71.9	149	78.8	191	73.5	331	83.0	351	80.1	52	80.0	85	71.4
Totals					462	100	377	100	268	100	292	100	189	100	260	100	399	100	438	100	65	100	119	100
Significance					ns				ns				ns				ns				ns			
Counselor talks about preparing for future helpful: NO					45	11.6	23	7.6	36	15.8	32	15.6	17	11.9	26	13.2	43	13.4	33	9.3	3	6.3	12	13.5
YES					344	88.4	281	92.4	192	84.2	173	84.4	126	88.1	171	86.8	279	86.6	323	90.7	45	93.8	77	86.5
Totals					389	100	301	100	228	100	205	100	143	100	197	100	322	100	356	100	48	100	89	100
Significance					ns				ns				ns				ns				ns			

ns = not significant.

TABLE 25 (cont'd)

Outcome Variables \ Student Groups	6th Grade				9th Grade				12th Grade Students											
									Work Experience Group				Skill Training Group				Participating Teacher Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Counselor talks about getting a job helpful:																								
NO									31	18.9	35	23.0	23	20.7	21	21.0	29	14.4	37	19.8	4	12.9	11	26.2
YES									133	81.1	117	77.0	88	79.3	79	79.0	173	85.6	150	80.2	27	87.1	31	73.8
Totals									169	100	152	100	111	100	100	100	202	100	187	100	31	100	42	100
Significance									ns				ns				ns				ns			
Counselor talks about applying to college helpful:																								
NO									82	30.7	80	27.7	44	24.0	45	15.9	102	23.4	90	18.9	7	11.5	22	19.0
YES									185	69.3	209	72.3	139	76.0	238	84.1	333	76.6	385	81.1	54	88.5	94	81.0
Totals									267	100	289	100	183	100	283	100	435	100	475	100	61	100	116	100
Significance									ns				ns				ns				ns			
Counselor talks about vocational or technical training helpful:																								
NO									40	21.9	36	20.6	28	17.6	21	16.8	44	19.8	41	16.9	7	28.0	12	24.5
YES									143	78.1	139	79.4	131	82.4	104	83.2	178	80.2	201	83.1	18	72.0	37	75.5
Totals									183	100	175	100	159	100	125	100	222	100	242	100	25	100	49	100
Significance									ns				ns				ns				ns			

ns = not significant.

ERIC

between 69% and 89% said it had been helpful to talk to their counselors about applying to college; and between 72% and 83% said it had been helpful to talk to counselors about vocational or technical training.

On a project-by-project basis, very few significant differences were found between participants and non-participants.

Conclusion

Both participants and non-participants held very favorable attitudes toward guidance and counseling and indicated they would like more frequent contact with counselors. No differences in attitudes were found between participants and non-participants.

Question 8: Do more student participants indicate having a career plan than non-participants?

Criteria

At all three grade levels, students were asked to choose one of nine alternatives describing the plans they have after high school (Question #4 in the Student Questionnaire); the responses to this question were then analyzed in terms of the "don't know" option vs. all other options to identify those who did and did not have a career plan. In addition, students at the 9th and 12th grade were asked directly whether they have a plan for preparing for the work they want to do in the future (see Question #49 in Student Questionnaire); this was a No/Yes response option. Results were analyzed using the chi-square test.

Results

Within each student group across all projects, small and very similar percentages of participants and non-participants chose the "don't know" option. The percentages were 15% and 12% respectively, at the 6th grade; 13% and 10% at the 9th grade; and between 4% and 9% for the various 12th grade student groups.

The results for the direct question "Do you have a plan...," shown in Table 26, indicated a significant difference between participants and non-participants only for the Participating Teacher group. In that group, 66% of the participants responded affirmatively, while only 60% of the non-participants responded that way. No differences between the participants and non-participants were found in any of the other groups. In general, between 56% and 66% of all the 9th and 12th grade students indicated that they had a career plan.

As expected, given the small number of students in each group who chose the "don't know" option, analysis of the first criterion on a within-project basis did not produce meaningful results. On the other indicator, significantly more participants said they had a plan than non-participants in only two projects for the 9th grade groups and in only one project in the Skill Training (12th grade) group. No other differences were found.

Conclusion

The findings indicate that well over half the students indicated that they had a plan. While a significant difference between participants and non-participants in the 12th grade Participating Teacher group was found on an across-project basis, analysis of results on an individual project basis produced no significant differences. In general, then, it is concluded that there was little difference between the proportions of participants and non-participants who indicated having a career plan.

TABLE 26

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for Q. 8: "Do more student participants indicate having a career plan than the comparison group?"

Outcome / Student Groups	9th Grade				12th Grade Students															
					Work Experience Group				Skill Training Group				Participating Teacher Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Career Plan?																				
No	527	42.5	475	43.6	161	35.0	146	34.9	149	38.6	161	37.3	217	34.1	276	39.6	35	38.0	78	42.4
Yes	714	57.5	614	56.4	299	65.0	272	65.1	237	61.4	271	62.7	419	65.9	421	60.4	57	62.0	106	57.6
Totals	1,241	100.0	1,089	100.0	460	100.0	418	100.0	386	100.0	432	100.0	636	100.0	697	100.0	92	100.0	184	100.0
Significance	ns				ns				ns				* (phi = .055)				ns			

KEY: * = significant at the .05 level of confidence
ns = not significant

Question 9: Do more student participants include further training or education as a portion of their career plan than non-participants?

Criterion

Students in the 9th and 12th grades who indicated that they had a career plan were asked to describe their plan on blank lines in the student questionnaire (see Student Question #49a). Each response was coded by a DA staff member to reflect whether it included further training or education.

Results

A very small percentage of the plans of both the participating and the non-participating students failed to include further training or education. The percentages of students indicating that their plan did include further training ranged from approximately 95% of both the participants and non-participants in the 12th grade Participating Teacher group to approximately 88% of the participants and non-participants in the 12th grade Work Experience group. Approximately 92% of both groups (i.e., participants and non-participants) of ninth graders indicated that they planned to receive some training after high school.

There was no meaningful difference between participants and non-participants for the 9th and 12th grade student groups within any project. In only one group in one project did the combined total of participants and non-participants who said they did not plan further training or education equal as many as 20 students and in that case the responses were approximately evenly divided between the two groups.

Conclusion

There is no difference between participants and non-participants with regard to this question. In general, the great majority of students, irrespective of project participation, indicated that their plan for preparing for work they "want to do in the future" does include further training or education.

Question 10: Do more student participants cite their career preference as their expected career than non-participants?

Criteria

In addition to being asked to cite "the different kinds of work you might like to do..." (Student Question #9), 12th grade students were also asked what kind of work they think they will be doing "10 years from now" and "20 years from now" (Student Question #41e,d). The response to the career preference question and to the expected work questions were compared for each student by DA coders, who noted whether any DOT two-digit code in the former question was the same as any DOT two-digit code in the latter questions. The difference between the participants and the non-participant groups in the extent to which career preference was the same as career expectation was then tested by means of the chi-square technique.

Results

As shown in Table 27, on an across-project basis no significant differences were found between participants and non-participants in the percentage of cases where students' choice of career preference equals career expectation in the Participating Teacher or the Work Experience groups. Significant differences were found, however, in the Counseling and Skill Training groups. In both these groups, the participants had a greater percent of agreement between career preference and career expectation.

In addition to comparisons between the responses of participating and non-participating students on this criterion, the extent of the relationship between career choice and expectation within each of the participant and non-participant groups is of interest. Similar career choices and career expectations were stated by 62% of the participants in the Counseling group. Agreement varied between 45% and 55% in each of the other 12th grade groups for both participants and non-participants.

When the results were examined on a within-project basis, significant differences between participants and non-participants in the extent of agreement between career preference and career choice were found in only three out of 14 projects (21%) in the Skill Training group and two of 23 projects (9%) in the Participating Teacher groups.

Conclusion

In general the findings suggest that there is little relation between program participation and the inclusion of students' expected careers among those they "might like to do." The possible exceptions to this conclusion when viewed on an across-project basis are participants enrolled in Job Entry Skill Training and Counseling groups. In general, a large proportion of the seniors surveyed, regardless of participant status or sampling group, did not include their expected career among the list of what they "might like to do."

TABLE 27

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for Q. 10: "Do more student participants cite their career preference as their expected career than non-participants?"

Student Groups / Outcome	12th Grade Students															
	Work Experience Group				Skill Training Group				Participating Teacher Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Career preference = expectation:																
NO	278	54.4	217	48.5	19	46.7	276	55.3	322	45.2	356	46.9	40	38.1	109	50.9
YES	233	45.6	230	51.5	22	53.3	223	44.7	390	54.8	403	53.1	65	61.9	105	49.1
TOTALS	511	100.0	447	100.0	41	100.0	499	100.0	712	100.0	459	100.0	105	100.0	211	100.0
Significance	ns				* (phi = .07)				ns				* (phi = .12)			

KEY: * = significant at the .05 level of confidence
ns = not significant.

Question 11: Do more student participants cite vocational education as their future career than the comparison group?

Discussion

The responses of each 12th grade student to the question of the kind of work they think they will be doing in the future (Student Question #4c, d) were coded to indicate whether a job associated with the field of vocational education was cited. It was found that, on a national basis, only 12 participants and 5 non-participants cited some form of vocational education as their future career. These frequencies were too small to warrant further discussion.

Question 12: Do students evidence behavioral gains as a result of participating in Part D project activities?

Criteria

Initially, it was hoped that direct comparisons between participating and non-participating students would be possible. However, procedures for these

comparisons could not be developed, and as a result it was decided to obtain an indication of the effect of project activities through a series of questions asked of participating teachers. Specifically, teachers were asked for their opinion of the effect of "the inclusion of career education activities" with respect to tardiness, absenteeism, discipline problems, and general interest in school. For example, each teacher was asked whether career education activities increased and decreased tardiness.

The responses were analyzed in terms of the proportion of teachers in each project who said there was an increase and decrease in each of the four behaviors. In addition, the responses of all teachers over all projects were analyzed to determine whether there was a difference between teachers who primarily taught students at the elementary grades (1-6), middle school grades (7-9), and senior high school grades (10-12). To assess the differences between teachers at the three grade levels, the following hypothesis was investigated:

> H_{o1}: The proportion of "yes" responses by teachers in the elementary, middle, and senior high school grade levels is the same. The chi-square test was employed with $\alpha = .05$.

Results

Table 28 shows the percentages of teachers at the three grade levels that indicated that there was a behavior change on the part of students as a result of "the inclusion of career education activities."

TABLE 28

Percentage of Teachers who Indicated that Career Education Activities Resulted in Certain Changes in Student Behavior

Behavioral Changes	Elementary School Teachers	Middle School Teachers	Senior High School Teachers
Increased Tardiness	0.8%	2.2%	5.7%
Decreased Tardiness	12.5%	21.0%	26.9%
Increased Absences	1.0%	3.7%	8.6%
Decreased Absences	19.9%	22.9%	31.6%
Increased Discipline Problems	3.0%	7.2%	7.5%
Decreased Discipline Problems	33.3%	39.1%	36.6%
Increased Interest in School	70.1%	70.1%	70.0%
Decreased Interest in School	2.2%	3.4%	4.6%

a) Tardiness: The results showed that 0.8%, 2.2%, and 5.7% of elementary, middle, and senior high school teachers, respectively, said that career education activities resulted in an increase in tardiness. On the other hand, 12.5%, 21.0%, and 26.9% of elementary, middle, and senior high school teachers, respectively, said that career education resulted in a decrease in tardiness. Differences at the .05 level of significance were found among the three grade levels in both variables. In 48 of the 49 projects surveyed, at least one teacher said that the inclusion of career education activities decreased tardiness; in three projects, over 50% of the teachers indicated that career education decreased tardiness. The number of teachers who indicated that career education increased tardiness was, in each project, always less than 20% of the responding teachers.

b) Absences: Results showed that 1.0%, 3.7%, and 8.6% of elementary, middle, and senior high school teachers, respectively, said that career education activities resulted in an increase in student absences. On the other hand, 19.9%, 22.9%, and 31.6% of elementary, middle, and senior high school teachers, respectively, said that career education resulted in decreased

absences. Differences at the .05 level of significance were found among the three grade levels in both variables. In all 49 projects that were surveyed, at least one teacher indicated that the inclusion of career education activities resulted in decreased absences; in five projects, over 50% of the teachers said that career education decreased absences. The number of teachers who indicated that career education increased absences was, in each project, always less than 20% of the responding teachers.

c) Discipline: Results showed that 3.0%, 7.2%, and 7.5% of elementary, middle, and senior high school teachers, respectively, said that career education activities resulted in increased discipline problems. The differences among the grade levels are significant at the .05 level. On the other hand, 33.3%, 39.1%, and 36.6% of elementary, middle, and senior high school teachers, respectively, said that career education resulted in decreased discipline problems. No significant differences were detected across grade levels on this variable. In all 49 projects that were surveyed, at least one teacher indicated that the inclusion of career education decreased discipline problems; in nine projects, more than 50% of the teachers surveyed said that career education decreased discipline problems. The number of teachers who indicated that career education increased discipline problems was, in all projects except one, always less than 20% of the responding teachers.

d) Interest in School: Results showed that 70.1%, 70.1%, and 70.0% of elementary, middle, and senior high school teachers, respectively, said that career education activities increased student interest in school. On the other hand, 2.2%, 3.4%, and 4.6% of elementary, middle, and senior high school teachers, respectively, said that career education decreased interest in school. No significant differences among the grade levels were found on either variable. In all but one of the 49 projects that were surveyed, 50% or more of the teachers indicated that interest in school increased. In only 53% of the projects did any teachers indicate that career education activities decreased student interest and in 20 of these 26 projects this view was reported by only one teacher.

Conclusions

Overall, the four sets of responses suggest that the inclusion of career education activities, in the opinion of teachers, led toward increased interest in school and, to a lesser extent, decreased discipline problems, absences, and tardiness.

Question 13: Are a greater number of students who have graduated from school and who participated in the Part D project employed full-time or engaged in further training than students who did not participate?

Criteria

Time and resource constraints did not permit a study design providing for the actual follow-up of graduates. Rather, the design relied on information which was to be obtained from school records. Specifically, information was sought with regard to the work status during the first year after graduation of students who graduated from school the year prior to the initiation of the Part D project and of students who graduated at the end of the 1972-73 school year. Comparisons were to be made of changes which occurred over time for participating and non-participating students.

Results

As indicated in the discussion of placement activities in Chapter VI, placement and graduate follow-up information typically was not available. Even in those cases where some related information was obtained, ambiguity in the definition of categories precluded meaningful analysis. As a result no useful information with regard to this question was obtained.

Conclusion

The lack of information with regard to this question is considered an important finding as it will not be possible to assess the effect of Part D and similar efforts on graduates in the future without reliable placement records or provision for extensive student follow-up procedures.

C. Summary and Conclusions

The findings with respect to the outcome questions which were addressed in this chapter present a mixed picture of program impact. When comparisons were made across all projects, participants were found to score significantly higher than non-participants on some outcome questions while scoring the same or lower on others. On a within-project basis, differences were found favorable to some projects, but not the majority, on most outcome questions; in many cases, either no differences were found or non-participants were found to score better. These mixed findings are further complicated by results which were not consistent over the three grade levels nor over the four 12th grade groups.

Table 29 summarizes the results with respect to the outcome questions, across all projects, by student group. Five of the thirteen outcome questions have been omitted from the summary. Question 13 was omitted because insufficient data were available for analysis. Question 11 was omitted because there was insufficient variability in the responses of participants and non-participants to permit analysis; i.e., over 95% of both groups responded in the negative. Questions 7 and 9 were omitted from the summary because large proportions of both participants and non-participants obtained maximum scores, precluding the possibility of significant differences between the groups. Finally, Question 12 was omitted since teacher responses were used to answer the question and no comparisons with non-participants were possible. Using the remaining outcome questions, the following results were obtained for each of the sampling groups:

- 6th Grade: Participants scored more favorably than non-participants on 4 of 6 outcome questions;
- 9th Grade: Participants scored more favorably than non-participants on 2 of 7 outcome questions;
- Participating Teacher Group (12th Grade): Participants scored more favorably than non-participants on 4 of 8 outcome questions;
- Counseling Group (12th Grade): Participants scored more favorably than non-participants 3 of 8 outcome questions;
- Work Experience Group (12th Grade): Participants scored more favorably than non-participants on none of the 8 outcome questions; and
- Skill Training Group (12th Grade): Participants scored more favorably than non-participants on one of the 8 outcome questions.

TABLE 29

Summary of Conclusions for Outcome Questions Across all Projects by Student Group *

Outcome Questions \ Student Groups	6th Grade	9th Grade	12th Grade			
			Participating Teacher	Counseling Group	Work Experience	Skill Training
Are student participants able to identify a greater number of occupations than non-participants? (Q1)	Yes	Yes	Yes	Yes	No	No
Do students demonstrate more familiarity with tasks and functions associated with selected occupations than the comparison group? (Q2)	No	Yes	Yes	Yes	No	No
Are student participants more familiar with the requisites associated with selected occupations than the comparison group? (Q3)	Yes	No	No	No	No	No
Do student participants score higher on pre-vocational, job readiness tests than the comparison group? (Q4)	Yes	No	No	No	No	No
Do student participants indicate more positive attitudes toward employment than non-participants? (Q5)	Yes	No	Yes	No	No	No
Is the variety of careers being considered by individual participating students greater than that of students in the comparison group? (Q6)	No	No	No	No	No	No
Do more student participants indicate having a career plan than the comparison group? (Q8)	--	No	Yes	No	No	No
Do more student participants cite their career preference as their expected career than non-participants? (Q10)	-	--	No	Yes	No	Yes

* The questions were answered "yes" if there was an overall significant difference in favor of participants for any of the criteria used to assess the question.

The outcome questions relate to the national objectives of the Part D Program and, as was determined at the outset of the study, positive responses to these questions serve as indicators that, on a student level, the program has succeeded in building the bridge between school and the world of work that is required by the Part D legislation. The results given in this chapter and summarized above seem to indicate that based on the analyses of all projects taken together, the program has succeeded in certain areas and has not achieved its student outcome objectives in others.

It must be noted that these findings should not be interpreted as a summary of all the student level outcomes associated with the program. With respect to the students enrolled in the Job Entry Skill Training and Work Experience groups, for example, this study does not address the question of the extent to which participants were provided technical skills in the multitude of possible areas of training. Similarly, some projects devoted considerable effort to achieving objectives which were not directly associated with the outcomes measured and, of course, an assessment of their success in attaining these objectives was not made. As indicated at the beginning of this chapter, it should also be noted that there is some indication that a selection factor which was not anticipated by project staff resulted in the participants in the Skill Training and Work Experience groups being somewhat less academically oriented than other participants and their comparison groups. The findings do, however, provide an indication of the extent to which project-supported activities made an impact on the students which they served in terms of the national program objectives.

The results of the outcome questions on an individual project basis are summarized in Tables 30 - 35. These tables show, for each sampling group, the number of projects by the number of outcome questions on which participants scored significantly better than non-participants. Four of the 13 outcome questions have been eliminated from these analyses. These questions are 9, 11, 12, and 13. Question 7, which had been eliminated from the overall summary, has been included in the project-by-project analysis because in a number of individual projects the scores were sufficiently below the maximum to warrant making comparisons between participants and non-participants.

The results from the project-by-project analysis were less favorable than those from the across-project analysis. As indicated in the tables below, a relatively small number of projects produced the favorable findings in each of the groups. In no case did more than 38% of the projects produce two or more favorable outcomes.

TABLE 30

Number of projects by number of questions on which participants scored significantly higher than non-participants
6th Grade Group*

Number of Questions:	6	5	4	3	2	1	0	Total
Number of Projects	0	1	3	6	7	12	16	45
Percent of Projects	0	2	7	13	15	27	36	100

TABLE 31

Number of projects by number of questions on which participants scored significantly higher than non-participants
9th Grade Group

Number of Questions:	7 or more	6	5	4	3	2	1	0	Total
Number of Projects	0	1	2	3	4	6	11	15	42
Percent of Projects	0	2	5	7	10	14	26	36	100

TABLE 32

Number of projects by number of questions on which participants scored significantly higher than non-participants
12th Grade Work Experience Group

Number of Questions:	4 or more	3	2	1	0	Total
Number of Projects	0	3	3	2	11	19
Percent of Projects	0	16	16	10	58	100

TABLE 33

Number of projects by number of questions on which participants scored significantly higher than non-participants
12th Grade Skill Training Group

Number of Questions:	2 or more	1	0	Total
Number of Projects	0	5	9	14
Percent of Projects	0	36	64	100

TABLE 34

Number of projects by number of questions on which participants scored significantly higher than non-participants
12th Grade Participating Teacher Group

Number of Questions:	7 or more	6	5	4	3	2	1	0	Total
Number of Projects	0	1	0	2	1	1	8	10	23
Percent of Projects	0	4	0	9	4	4	35	43	100

TABLE 35

Number of projects by number of questions on which participants scored significantly higher than non-participants
12th Grade Counselor Group

Number of Questions:	2 or more	1	0	Total
Number of Projects	0	1	3	4
Percent of Projects	0	25	75	100

* Only six of the nine outcome questions included in this analysis are applicable at the sixth grade level.

The Part D program seems to have made its greatest impact on the 6th, 9th, and 12th grade Participating Teacher groups. This suggests that both within projects and overall the greatest impact occurred through the infusion of career education concepts into the classroom by participating teachers.

With respect to two of the outcome questions not included on the preceding tables (i.e., "improved" student behaviors, and placement after graduation), the overall findings again are not completely clear. As indicated, placement data simply was not available and therefore no assessment of project impact could be made. Generally, the responses of participating teachers indicated they judged that the inclusion of career education activities increased student interest in school and, to a lesser extent, decreased discipline problems, absences, and tardiness.

Given the discussion in earlier chapters with respect to the activities specified in the Part D legislation and USOE policy paper which projects addressed, the budget to expenditure patterns which were followed, and the indications regarding program management, these mixed student outcome results were to some extent to be expected.

In the chapter which follows we will investigate selected factors which may explain the variable nature of the outcomes which occurred.

CHAPTER IX: DISCUSSION AND INTERPRETATION OF STUDENT OUTCOMES

A. Introduction

As reported in the preceding chapter, investigation of the indicators of the student level outcomes produced mixed results. While all the federally expected outcomes did not occur as planned, there were several areas of student performance at each grade level where they did occur. Further, the findings indicate that on a project by project basis the planned outcomes occurred with some uniformity in a small number of projects, on a highly variable basis in many projects, and in some projects rarely, if at all.

As indicated in Chapter III, the study design provided for the collection of data pertaining to a set of research questions which were expected to be related to the student level results of the program. Given that the basic purpose of the study is not only to report the results of the first years of the Part D program but also to provide information which may be of use in planning for the future, the focus of the discussion in this chapter is on isolating those factors which may best explain significant outcomes; that is, particular attention throughout will be given to searching for those factors which significantly contributed to the projects and program components producing the most favorable student outcomes.

The findings below are divided into two major categories. In the first, findings and analysis with respect to the research questions identified prior to the data collection efforts are presented. The second section provides a discussion of possible relationships between program and project processes which were judged potentially important on the basis of the findings reported in earlier chapters and other information obtained during the visits to fifty Part D projects.

B. Findings for Treatment Research Questions

This first category of possible explanations for the student outcomes addresses the set of research questions agreed upon by the study team and USOE in the course of developing the study design. The data upon which the answers to these questions are based were obtained from the randomly selected sample of participating and non-participating students, and the random sample of teachers and counselors. For clarity of presentation, the first three of the original set of six questions presented in Chapter III will be grouped and treated as essentially one question with several indicators.

1. RESEARCH QUESTION ONE. Are student participants exposed to more career familiarization curriculum activities than non-participants?

   A primary objective of the Part D program at the project level was to stimulate teachers to increase the extent to which their students were exposed to career related concepts and information. It was presumed that this basic objective would be achieved by altering the classroom curriculum such that teachers would discuss careers and specific jobs in class, would take students on field trips where they would see people employed in the areas they were studying, and would bring guest speakers into the classroom to speak about their jobs and the relationships of their work to the things the students were learning in class. While it was found that in some cases special classes or designated segments of a class were devoted to studying a variety of jobs per se the typical approach was to integrate the study of occupations into on-going activites.

   To determine whether or not students participating in the Part D projects were exposed to more career familiarization curriculum activities than non-participating students, data with respect to several criteria were collected and

analyzed. Responses of participants and non-participants were analyzed both on a project by project basis and across all projects. In terms of these indicators, participating students were judged to have been exposed to more familiarization activities when the chi-square test to determine the significance of differences between two groups was significant at the 5% level. In addition, the data were reviewed to determine if the expected relationship between career familiarization activities and the results found for student outcome questions pertaining to occupational familiarization, job readiness, and attitudes toward work actually occurred. The findings for the criteria are presented separately below.

Criterion 1a. All students were asked how often their teacher talks "about different kinds of jobs." Three response options were provided: "Hardly ever, "Sometimes" and "Very Often." This was question #6 of the student questionnaire.

Results

The findings with regard to this criterion for each of the six student groups are shown in Table 36. The differences between participants and non-participants were significant beyond the 1% confidence level for all groups except the counseling group of 12th graders, who, by definition, had no participating teachers. It is of interest to note that 75% or more of the participating students in every group except counseling indicated that their teachers talked about jobs at least sometimes.

A summary of the distribution of the findings on a within-projects basis is presented in Table 37. The results in twenty-five projects indicated that participating students received greater exposure than non-participants in at least one of the student groups.

Criterion 1b. All students were asked if they had "gone on field trips this year to see people working." Response options were: "No," "Once or Twice," and "More than Twice." This was question #8 of the student questionnaire.

Results

The findings for each group of students are shown in Table 36. Again, there was a significant difference between the participants and the non-participants (beyond the 1% level) for every group but the 12th grade Counseling group, with participants reporting more frequent field trips. It is of interest to note that 55% or more of the participants in each group indicated that they had not gone on a single field trip to see people working.

A summary of the individual project data is shown in Table 38. The results in twenty-seven of the projects indicated that participants engaged in field trip activities more frequently than did non-participants in at least one of the student groups.

Criterion 1c. All students were asked whether visitors had come to their class "this year" to talk about their work. The response options were: No, Once or Twice, and More than Twice. (Question #7, Student Questionnaire)

Results

The findings, shown in Table 36, indicate that there was a significant difference between the participants and non-participants in three of the six groups: 9th graders, the 12th grade Work Experience group, and the 12th grade Participating Teacher group. At least 44% of each participating group reported that no visitors had come to their class during the year to talk about their work.

TABLE 36

COMPARISON BETWEEN PARTICIPANTS (P) AND NON-PARTICIPANTS (NP) ON CAREER FAMILIARIZATION CURRICULUM ACTIVITIES, BY GROUPS

Treatment Criteria / Student Group	6th Grade				9th Grade				12th Grade Students															
									Work Experience Group				Skill Training Group				Participating Teacher Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1a. Teacher talks about different kinds of jobs																								
Hardly ever	351	24.2	443	33.7	354	25.1	430	33.2	55	10.8	100	22.5	87	20.4	166	33.5	160	22.6	251	33.1	32	30.5	70	32.9
Sometimes	782	53.8	628	47.8	744	52.7	680	52.4	201	39.4	182	41.0	206	48.4	258	52.0	366	51.7	395	52.0	59	56.2	118	55.4
Very Often	320	22.0	244	18.6	315	22.3	187	14.4	254	49.8	162	36.5	133	31.2	72	14.5	182	25.7	113	14.9	14	13.3	25	11.7
Totals	1,453	100.0	1,315	100.0	1,413	100.0	1,297	100.0	510	100.0	444	100.0	426	100.0	496	100.0	708	100.0	759	100.0	105	100.0	213	100.0
Significance	** (C.V. = .10)				** (C.V. = .13)				** (C.V. = .18)				** (C.V. = .23)				** (C.V. = .16)				n.s.			
1b. Student has gone on field trip to see people working																								
No	804	55.7	810	62.2	1,063	75.8	1,087	84.7	303	59.6	362	81.5	262	61.6	375	76.1	447	63.6	548	72.9	76	72.4	130	61.6
Once of Twice	442	30.6	374	28.7	290	20.7	179	13.9	128	25.2	74	16.7	111	26.1	96	19.5	200	28.4	181	24.1	24	22.9	71	33.6
More than Twice	198	13.7	119	9.1	49	3.5	18	1.4	77	15.2	8	1.8	52	12.2	22	4.5	56	8.0	23	3.1	5	4.8	210	4.7
Totals	1,444	100.0	1,303	100.0	1,402	100.0	1,284	100.0	508	100.0	444	100.0	425	100.0	493	100.0	703	100.0	752	100.0	105	100.0	211	100.0
Significance	** (C.V. = .08)				** (C.V. = .12)				** (C.V. = .28)				** (C.V. = .17)				** (C.V. = .13)				n.s.			
1c. Visitors have come to class to talk about their work																								
No	710	49.4	683	52.2	803	57.0	865	67.7	247	48.5	189	42.4	223	52.2	208	42.4	312	44.2	362	48.1	64	62.1	94	44.3
Once or Twice	510	35.5	417	31.9	431	30.6	342	26.8	133	26.1	187	41.9	129	30.2	185	37.7	255	36.1	276	36.7	31	30.1	92	43.4
More than Twice	218	15.2	209	16.0	176	12.5	71	5.6	129	25.3	70	15.7	75	17.6	98	20.0	139	19.7	115	15.3	8	7.8	26	12.3
Totals	1,438	100.0	1,309	100.0	1,410	100.0	1,278	100.0	509	100.0	446	100.0	427	100.0	491	100.0	706	100.0	753	100.0	103	100.0	212	100.0
Significance	n.s.				** (C.V. = .15)				** (C.V. = .18)				n.s.				** (C.V. = .07)				n.s.			

KEY: * = significant at .05 level of confidence
** = significant at .01 level of confidence
n.s. = not significant
c.v. = Cramer's V

A summary of the individual project data is shown in Table 39. The results in twenty-four projects indicated more exposure to visitors for participants than for non-participants in at least one of the student groups.

TABLE 37

SUMMARY OF WITHIN PROJECT FINDINGS
FOR TREATMENT QUESTION:

"How often does your teacher talk about different kinds of jobs?"

Reporting Category \ Student Group	6th Grade	9th Grade	12th Grade Students: Work Experience	12th Grade Students: Skill Training	12th Grade Students: Participating Teacher
Number of projects with greater exposure for participants	10	9	7	5	5
Projects without greater exposure for participants	35	33	12	9	18
Total Projects	45	42	19	14	23
% with greater exposure for participants	22%	21%	37%	36%	22%

TABLE 38

SUMMARY OF WITHIN PROJECT FINDINGS
FOR TREATMENT QUESTION:

"Have you gone on field trips this year to see people working?"

Reporting Category \ Student Group	6th Grade	9th Grade	12th Grade Students: Work Experience	12th Grade Students: Skill Training	12th Grade Students: Participating Teacher
Number of projects with greater exposure for participants	17	7	8	2	7
Projects without greater exposure for participants	28	35	11	12	16
Total Projects	45	42	19	14	23
% with greater exposure for participants	38%	17%	42%	14%	30%

TABLE 39

SUMMARY OF WITHIN PROJECT FINDINGS
FOR TREATMENT QUESTION:

"Have visitors come to your class this year to talk about their work?"

Reporting Category \ Student Group	6th Grade	9th Grade	12th Grade Students: Work Experience	12th Grade Students: Skill Training	12th Grade Students: Participating Teacher
Number of projects with greater exposure for participants	15	12	4	2	8
Projects without greater exposure for participants	30	30	15	12	15
Total Projects	45	42	19	14	23
% with greater exposure for participants	33%	29%	21%	14%	35%

Summary of Results

If all three of the indicators of career familiarization curriculum activities are considered together, seven projects failed to shown any significant relation between treatment and participation and ten projects had a significant relationship for each of the three indicators in at least one of the student groups.

Relationship to student outcomes

In order to determine whether the obtained results on student outcomes could be related, at least partially, to the three treatment indicators pertaining to career familiarization curriculum activities, the lists of projects in which there were significant outcome findings were compared with the lists of projects in which there were significant treatment criteria findings. The greater the number of projects which are on both lists, the greater the relation between treatment and outcome. This analysis was carried out for each of the three treatment indicators and each of the eight outcome measures associated with outcome questions 1, 2, 3, 7 and 12. The results are shown in Table 40, in terms of: a) the number of projects that had agreements on outcomes and the treatment indicators; b) the number of such agreements that would be expected by chance (based on the total number of projects with significant relationships for outcomes and the total number with significant relationships for treatment indicators), and c) the maximum number of agreements possible, given the number of significant relationships found. Inspection of the table indicates that relationships beyond chance were not found between treatment and combined outcomes either by student group or over all groups. Although they are not shown in the table, the results are essentially the same for each of the eight outcomes taken separately.

The general conclusion regarding career familiarization curriculum activities is that participants tend to be exposed to them more than non-participants, but that this differential does not account for the outcome findings.

TABLE 40

Number of Project Agreements Between Having Significant Findings on Outcomes and Significant Findings on Treatment Indicators

Treatment \ Student Groups	6th Grade	9th Grade	12th Grade Students			Totals
			Work Experience	Skill Training	Participating Teacher	
Treatment Indicator 1a						
Number of agreements	24	16	7	0	3	50
Chance expectations	17	12	7	2	8	46
Maximum possible	68	59	21	7	25	180
Treatment Indicator 1b						
Number of agreements	31	10	9	2	7	59
Chance Expectations	30	12	9	2	9	62
Maximum possible	77	51	21	5	29	183
Treatment Indicator 1c						
Number of agreements	26	19	2	4	7	58
Chance expectations	25	19	3	2	10	59
Maximum possible	77	67	20	5	31	200
Combined Indicators						
Number of agreements	81	45	18	6	17	167
Chance expectations	72	43	19	6	27	167
Maximum possible	222	177	62	17	85	563

2. RESEARCH QUESTION TWO. Are more participating students assisted by school personnel in securing jobs than non-participants?

Criterion. In addition to complying with the mandate that projects attempt to place all students in employment or further training after completion of their schooling, it was anticipated that many projects would provide assistance to students in finding employment during the school year and during summer vacations. As indicated in the previous chapter and in the discussion of project activities (Chapter VI), neither school nor project records permitted an adequate investigation of placement efforts.

The only available data in this area was Questionnaire Item 39 which asked all 9th and 12th grade students whether the school has "ever helped you get a job?" The responses to the question provide some indication of the extent to which participating and non-participating students differed with respect to the amount of assistance they received. Since it was assummed at the start of the study that this difference, if it existed, might provide a partial explanation for the differences between participants and non-participants with respect to the outcome questions pertaining to job readiness and attitudes toward work, the responses of participating and non-participating students at the 9th and 12th grade were tested for differences using the chi-square test.

Results and Conclusions

The findings across all projects are presented in Table 41. As indicated, a significantly greater proportion of participating students in the 12th grade Skill Training Group and Participating Teacher Group indicated that the school had helped them get a job.

On a project by project basis there was little difference between participants and non-participants with respect to this item. Specifically, there was a significant difference between participants and non-participants in two projects at the ninth grade level. At the 12th grade level, significant differences were obtained in three, two and one projects in the Work Experience, Participating Teacher and Counseling groups, respectively. These differences were all found in different projects. While little difference was noted between the assistance provided participants and non-participants on a project by project basis, the differences that were obtained across all projects are of note. With respect to the Skill Training group, the data suggest that in addition to providing training the schools also offered more assistance in securing employment to this group than other student groups. While the students in the Participating Teacher group were not provided specific training in job entry skills through the project, these students also appear to have been provided more assistance in securing employment than non-participating students. While there was a significant difference found in these two groups between participants and non-participants, most students nevertheless responded negatively to the question. This finding, together with the responses for the other groups leads to the conclusion that relatively few students in any group received assistance in securing a job.

The results suggest that while the overall program may have had some success in stimulating teachers and counselors to be of more assistance in helping students find employment, the impact has been marginal in each specific project setting. Although it could be concluded that project impact has been so pervasive throughout the school, thereby eliminating differences between participants and non-participants, the fact that the

TABLE 41

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for the Question: "Has the school ever helped you get a job?"

Response Options \ Student Groups	9th Grade				12th Grade Students															
					Work Experience Group				Skill Training Group				Participating Teacher Group				Counselling Group			
	P		NP		P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
YES	290	21.3	234	18.9	237	47.6	188	42.2	132	31.6	100	20.7	175	25.2	149	19.8	28	26.9	52	24.8
NO	1,072	78.7	1,001	81.1	261	52.4	258	57.8	286	68.4	382	79.3	520	74.8	604	80.2	76	73.1	158	76.2
Totals	1,362	100.0	1,235	100.0	493	100.0	446	100.0	418	100.0	482	100.0	695	100.0	753	100.0	104	100.0	210	100.0
Significance	ns				ns				** (phi = .14)				* (phi = .06)				ns			

KEY:

* = significant at the .05 level of confidence
** = significant at the .01 level of confidence
ns = not significant

project differences that have been found included instances where control group students were selected from both within and outside of the project school system tends to support the interpretation of marginal impact.

As might be expected from the relatively small proportion of students who indicated they were provided assistance in securing a job, and that variable's general lack of relationship with participation, no meaningful relationship to student outcome question responses was found.

3. RESEARCH QUESTION THREE. Do participating students receive more occupational guidance and counseling during a school year than non-participants?

Criteria. The Student Questionnaire for the 9th and 12th grades contained five items pertaining to this question, and the Questionraire for the 12th grade contained six additional items. These items are shown in the data tables. Comparisons were made between participating and non-participating students with respect to each of the items, both across all projects and within projects. These comparisons were evaluated by means of the chi-squate test. In the sections which follow, the findings for all of the criteria will be presented first in terms of the across-project data, followed by the within-project data.

Results Across Projects

a) Items #43 and #44. The results for these two questions, as shown in Table 42, indicate no relation between these indicators and participation, except with regard to the counselors talking to individual students about how to prepare for their future at the 9th grade level. It should be noted that despite the significant relation with participation, only 33% of the 9th grade participants indicated that they had received this treatment (compared to 28% of the non-participants). Approximately half of the 12th graders responded affirmatively.

b) Items #45 and #46. As shown in Table 43, for three of the five groups there was a significant relation between participation and affirmative responses to talking with a teacher individually about the student's future work and how to prepare for it. For each of the indicators, more 9th grade participants, more 12th grade Skill Training participants, and more of the 12th grade Participating Teacher group responded affirmatively than the corresponding non-participants.

c) Item #49. Participants at the 9th grade level reported a greater frequency of meeting with their guidance counselor than non-participants. The difference however, is not great, with 73% of the participants and 68% of the non-participants indicating that they met with their counselor at least once. The only other significant relation found was for the Participating Teacher group, where 90% of the participants and 83% of the non-participants saw their counselor at least once during the year. These results are shown in Table 43.

d) Items #50 a, b, c. The findings indicate that more Skill Training participants have talked with a counselor about getting a job and about getting vocational or technical training than the non-participants. As shown in Table 44, these were the only two instances of a positive relation between participation and the treatments. It is of interest to note that the Skill Training group reported a smaller frequency of talking with a counselor about getting a job than any of the other three participating groups, and a larger frequency of talking about getting further training.

TABLE 42

Comparison Between Participants (P) and Non-Participants (NP), By Student Group, Across all Projects, for Questions 43 and 44.

Treatment Criteria \ Student Group	9th Grade				12th Grade Students															
					Work Experience Group				Skill Training Group				Participating Teacher Group				Counselor Group			
	P		NP		P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#43: Has a counselor talked to you about your future work?																				
YES	477	36.9	384	33.6	271	57.1	298	67.9	202	50.8	263	57.5	406	61.6	446	61.2	67	67.7	123	63.4
NO	814	63.1	759	66.4	204	42.9	141	32.1	196	49.2	194	42.5	253	38.4	283	38.8	32	32.3	71	36.6
Totals	1,291	100.0	1,143	100.0	475	100.0	439	100.0	398	100.0	457	100.0	659	100.0	729	100.0	99	100.0	194	100.0
Significance	ns				ns				ns				ns				ns			
#44: Has a counselor talked about how to prepare for your future?																				
YES	412	32.7	313	27.6	229	48.7	211	48.7	145	37.6	200	44.3	327	50.2	359	49.9	50	51.5	91	47.6
NO	849	67.3	821	72.4	241	51.3	222	51.3	241	63.4	251	55.7	325	49.8	361	50.1	47	48.5	100	52.4
Totals	1,261	100.0	1,134	100.0	470	100.0	433	100.0	386	100.0	451	100.0	652	100.0	720	100.0	97	100.0	191	100.0
Significance	** (phi = .06)				ns				ns				ns				ns			

KEY:

** = significant at .01 level of confidence
ns = not significant

TABLE 43

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for Questions 45, 46, and 49

Treatment Criteria / Student Groups	9th Grade				12th Grade Students															
					Work Experience Group				Skill Training Group				Participating Teacher Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#45: Has a teacher talked to you about your future work?																				
YES	398	31.2	267	23.6	278	59.0	229	52.4	207	52.3	175	39.0	341	52.5	306	42.6	41	42.3	78	41.1
NO	877	68.8	866	76.4	193	41.0	208	47.6	189	47.7	274	61.0	308	47.5	412	57.4	56	57.7	112	58.9
Totals	1,275	100.0	1,133	100.0	471	100.0	437	100.0	396	100.0	449	100.0	649	100.0	718	100.0	97	100.0	180	100.0
Significance	** (phi = .09)				ns				** (phi = .14)				** (phi = .10)				ns			
#46: Has a teacher talked about how to prepare for your future?																				
YES	400	31.8	293	26.1	238	50.9	199	45.5	171	44.3	167	37.7	307	47.7	278	38.8	39	40.2	69	36.5
NO	856	68.2	829	73.9	230	49.1	238	54.5	211	55.2	282	62.8	337	52.3	439	61.2	58	59.8	120	63.5
Totals	1,256	100.0	1,122	100.0	468	100.0	437	100.0	382	100.0	449	100.0	644	100.0	717	100.0	97	100.0	189	100.0
Significance	** (phi = .07)				ns				** (phi = .09)				** (phi = .09)				ns			
#49: How many times have you met with a counselor this year?																				
None	343	26.9	361	32.1	68	14.5	45	10.3	75	19.0	78	17.6	63	9.7	103	14.4	12	12.2	27	14.4
Once or Twice	526	41.3	459	40.8	191	40.7	171	39.3	161	40.9	145	32.7	253	39.0	239	33.5	26	26.5	60	32.1
More than Twice	406	31.8	306	27.2	210	44.8	219	50.3	158	40.1	220	49.7	332	51.2	327	52.1	60	61.2	100	53.5
Totals	1,275	100.0	1,126	100.0	469	100.0	435	100.0	394	100.0	443	100.0	648	100.0	714	100.0	98	100.0	187	100.0
Significance	** (c.v. = .07)				ns				ns				* (c.v. = .08)				ns			

KEY:

* = significant at .05 level of confidence
** = significant at .01 level of confidence
ns = not significant
c.v. = Cramer's V

TABLE 44

Comparison Between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects for Questions 50a, 50b, & 50c.

Treatment Criteria \ Student Groups	12th Grade Students															
	Work Experience Group				Skill Training Group				Participating Training Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#50a.: Has a counselor talked about getting a job?																
YES	169	37.2	158	37.1	113	30.5	103	24.3	209	32.1	193	28.1	33	36.9	46	25.4
NO	285	62.8	268	62.9	258	69.5	320	75.7	432	67.9	487	71.6	59	64.1	132	74.6
Totals	454	100.0	426	100.0	371	100.0	423	100.0	636	100.0	680	100.0	92	100.0	177	100.0
Significance	ns				*				ns				ns			
#50b.: Has a counselor talked about applying to college?																
YES	279	61.5	304	72.2	193	52.0	295	70.1	454	71.7	496	73.5	63	67.0	124	70.5
NO	175	38.5	117	27.8	178	48.0	126	29.9	179	28.3	179	26.5	31	33.0	52	29.5
Totals	454	100.0	421	100.0	371	100.0	421	100.0	633	100.0	675	100.0	94	100.0	176	100.0
Significance	ns				ns				ns				ns			
#50c.: Has a counselor talked about getting vocational or technical training?																
YES	187	41.6	187	44.5	167	45.3	132	31.7	232	36.8	254	37.8	26	28.0	52	29.5
NO	263	58.1	233	55.5	202	54.7	284	68.3	399	63.2	418	62.2	67	72.0	124	70.5
Totals	450	100.0	420	100.0	369	100.0	416	100.0	631	100.0	672	100.0	93	100.0	176	100.0
Significance	ns				** (phi = .14)				ns				ns			

KEY:

** = significant at .01 level of confidence
ns = not significant

e) Items #51 a, b, c. The finding for these items, shown in Table 45, indicate that more participants than non-participants in each 12th grade group except the Counseling group had talked with a teacher individually about getting a job (between 42% and 61%) and that more participants than non-participants in the Work Experience and in the Skill Training group had talked with a teacher about getting vocational or technical training (43% and 41%, respectively). Only in the Participating Teacher group did more participants than non-participants talk with a teacher about applying to college (49%).

Results Within Projects

The number of projects in which a significant relation was found between participation and each of the 11 specific treatment items is shown in Table 46. As indicated, the frequencies are very small; in only one instance does the number or projects in which there was a significant relation exceed 10% of the projects: 9th grade participants in 11 of the 42 projects (26%) reported meeting with their counselor more frequently than did non-participants. In view of the small frequencies obtained, analysis to determine the relation between these findings and student outcomes was not warranted

Conclusion

The findings on this research question indicate that participating students receive more occupational guidance and counseling than non-participating students, but only to a small extent, and that on the 12th grade level it appears that such treatment comes more from teachers than from counselors.

4. RESEARCH QUESTION FOUR. Do participating teachers encourage students to consider careers in vocational education?

Criterion. The Part D legislation provides that projects should, among other efforts, "motivate and provide professional preparation for potential teachers of vocational education." To obtain an indication of the extent to which this occurred and its relationship to the student responses with regard to vocational education as a career choice, the participating teachers in each project were asked: "Do you encourage students to go into vocational or technical teaching?" (Teacher Questionnaire Item 10). Response options were: "rarely or never," "sometimes," and "often."

Results and Conclusion. In Chapter VIII it was reported that, nationwide, only 12 students cited vocational education as their future career. However, when teachers were asked whether they encouraged students to go into vocational teaching, 32% of the participating high school teachers indicated that they often did so; 48% indicated that they did so "sometimes"; and 21% responded "rarely or never." From these results it is apparent that, in this specific instance, teachers were not able to influence their students to any degree.

C. Other Potential Relationships

In the process of searching for explanations of the variations in student outcomes across student groups and across projects, the full range of information obtained during the visits to the fifty projects was analyzed. This included information pertaining to project staffing patterns, organizational structures, stated objectives, and other factors which were discussed in earlier chapters of this report. Patterns which distinguished projects on the basis of the student outcome questions did not emerge as a result of this review and analysis.

TABLE 45

Comparison between Participants (P) and Non-Participants (NP), by Student Group, Across all Projects, for Questions 51a, 51b, & 51c.

Student Group	12th Grade Students															
	Work Experience				Skill Training				Participating Teacher Group				Counseling Group			
	P		NP		P		NP		P		NP		P		NP	
Treatment Criteria	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
#51a: Has a teacher talked about getting a job?																
YES	277	60.9	214	51.6	158	42.5	133	32.0	276	44.2	215	32.1	29	30.9	51	29.1
NO	178	39.1	201	48.4	214	57.5	283	68.0	348	55.8	455	67.9	65	69.1	124	70.9
Totals	455	100.0	415	100.0	372	100.0	416	100.0	624	100.0	670	100.0	94	100.0	175	100.0
Significance	** (phi = .09)				** (phi = .13)				** (phi = .13)				ns			
#51b: Has a teacher talked about applying to college?																
YES	209	46.9	201	48.7	149	41.3	191	45.8	305	48.9	287	43.0	33	35.5	75	43.4
NO	237	53.1	212	51.3	212	58.7	226	54.2	319	51.1	380	57.0	60	64.5	98	56.6
Totals	446	100.0	413	100.0	361	100.0	417	100.0	624	100.0	667	100.0	93	100.0	173	100.0
Significance	ns				ns				* (phi = .06)				ns			
#51c: Has a teacher talked about getting vocational or technical training?																
YES	189	43.3	149	36.0	150	41.4	103	25.0	198	31.8	185	27.9	20	21.5	41	24.1
NO	258	57.7	265	64.0	212	58.6	309	75.0	425	68.2	479	72.1	73	78.5	129	75.9
Totals	447	100.0	414	100.0	362	100.0	412	100.0	623	100.0	664	100.0	93	100.0	170	100.0
Significance	* (phi = .07)				** (phi = .18)				ns				ns			

KEY:

* = significant at .05 level of confidence
** = significant at .01 level of confidence
ns = not significant

TABLE 46

SUMMARY OF WITHIN PROJECT FINDINGS
FOR TREATMENT QUESTIONS

Number of Projects with a Significant Relation Between Treatment and Participation

		12th Grade			
Treatment Question	9th Grade	Work Experience	Skill Training	Participating Teacher	Counselor
43	4	0	1	1	2
44	2	2	1	1	0
45	4	3	2	2	1
46	4	1	1	2	0
49	11	0	1	3	1
50a	--	0	1	2	1
50b	--	0	0	1	0
50c	--	0	4	0	0
51a	--	1	3	2	1
51b	--	0	0	2	0
51c	--	1	4	0	1
Total Projects	42	19	14	23	4

In addition to this analysis, the responses to the questions asked of participating teachers and counselors and of non-participating teachers were analyzed. The results of this analysis also did not produce patterns which served to explain the student outcomes reported in Chapter VIII. It was found, for example, that both across projects and on a project-by-project basis most counselors did not indicate they had extensive experience outside the school system which would assist them in placing students in jobs. While this corresponds logically with the student responses indicating that they received relatively little assistance from school personnel in securing employment, there was no relationship between the projects in which several of the counselors indicated that they did have such out-of-school experience and those in which significantly more participating than non-participating students indicated that they had been assisted by school personnel or those in which participants indicated more favorable attitudes toward work.

Similarly, results of comparing counselor and teacher responses with respect to the extent of in-service training in career education to various student outcome indicators did not provide explanations for the variations in project outcomes. In fact, the results of comparing responses of participating and non-participating 6th grade teachers suggested that, in terms of the use of community resources, in-service training in career education, the importance of including career education in the school curriculum, and most other responses which might be related to career familiarization outcomes, there was surprisingly little difference between the two groups of respondents.

There was a significant difference, however, on one indicator which may at least suggest an explanation for some of the difference between participating and non-participating 6th graders across projects. Both participating and non-participating teachers were asked whether they "have a written curriculum guide for including career education in your classes?" In response to this item 22% of the non-participating as compared to 62% of the participating teachers indicated that they had prepared such a guide. While on the one hand the difference between the two groups in the response to this item may be related to the generally positive outcomes of participating 6th graders, the fact that 22% of the non-participating teachers also had a curriculum guide "for including career education" in their classes is perhaps the more important finding. It suggests that in some cases the lack of observed differences may have been the result of efforts on the part of both state and project staff to persuade teachers not participating in a Part D project to infuse career education concepts into their curricula. Given the pattern which did emerge, however, there is some indication that other factors may have been operating.

Since neither the analysis of specific responses from teachers and counselors nor the analysis of various factors associated with project management and operations provided meaningful explanations for the findings, an additional analysis was carried out in which projects containing the bulk of the positive findings were compared to all projects in terms of the number of students served in each group and the changes in these numbers over time. This analysis is described below.

As indicated previously, the answers to several questions were to serve as indicators of the extent to which student outcomes consistent with Part D legislative intent were produced. Six questions served as indicators at the 6th grade level and nine served at the other levels. For purposes of this analysis answers to a question were considered favorable with regard to the Part D legislative intent if for at least one indicator of that question participants did significantly better than non-participants. The results of this analysis for each student group are discussed in the following sections.

1. Elementary Level

At the sixth grade level, student data comparing participating to non-participating students were obtained in forty-five projects. Table 47 indicates the number of projects in which different numbers of outcome questions showed more favorable responses by the participants. From the table, it can be seen, for example, that in one project participants did significantly better than non-participants in five out of the six questions.

TABLE 47

NUMBER OF PROJECTS BY NUMBER OF OUTCOME QUESTIONS ON WHICH SIXTH GRADE PARTICIPANTS SCORED SIGNIFICANTLY BETTER THAN NON-PARTICIPANTS

Number of Questions	Number of Projects	Percent of Projects	Percent of Favorable Answers
0	16*	36%	--
1	12	27%	20%
2	7	16%	23%
3	6	13%	30%
4	3	7%	20%
5	1	2%	8%
6	0	0%	--
Total	45	100%	100%

* In 2 projects the participants and non-participants sampled were not equivalent in ethnic composition.

As Table 47 shows, there were no positive student outcomes in 36% of the projects. Participants did better than non-participants on three or more of the six study questions in ten or 22% of the projects. These projects accounted for 58% of the favorable answers found. For purposes of analysis the average number of elementary school participants in these ten projects was compared to the average number of elementary school participants in the total group of 45 projects. It was found that for each year the average number of students was substantially lower for the 10 projects than for the total group of projects. As shown in Table 48, during the first project year these ten projects reported a per project average of participants that was 19% below the average for the total group. They were 26% and 22% below the total group's average in the second and third year, respectively.

TABLE 48

COMPARISON OF AVERAGE NUMBER OF SIXTH GRADE PARTICIPANTS PER PROJECT TO THE AVERAGE FOR THE 10 MOST FAVORABLE PROJECTS, BY PROGRAM YEAR

Reporting Category	Average Enrollment		
	PY I	PY II	PY III
All projects: Average Number of Elementary Participants/Project	1709	1977	2512
10 Most Favorable Projects: Average Number of Elementary Participants/Project	1390	1466	1958
Difference	319	511	554
Percent Fewer Participants in 10 Most Favorable Projects	19%	26%	22%

2. Junior High School Level

Test results were obtained in 42 projects at the junior high school level. As indicated previously, there were nine research questions serving as indicators of student outcomes at this level. The result of comparing participating students to non-participating students (shown in Table 49) reveals that in 15 of the 42 projects (36%) there were no positive outcomes. Participants scored higher than non-participants on three or more of the research questions in 10 projects (24%). This accounts for 64% of the favorable answers found. Comparison of the average number of junior high school participants in the ten most favorable projects with the average reported for all projects, as shown in Table 50, reveals that the average for the 10 most favorable projects was substantially lower than the average for all projects. The 10 most favorable projects averaged 61% fewer junior high participants per project than did all projects the first year. For the second and third year these 10 projects were 57% and 50% below the average reported for all projects.

TABLE 49

NUMBER OF PROJECTS BY NUMBER OF OUTCOME QUESTIONS ON WHICH NINTH GRADE PARTICIPANTS SCORED SIGNIFICANTLY BETTER THAN NON-PARTICIPANTS

Number of Questions	Number of Projects	Percent of Projects	Percent of Favorable Answers
0	15*	36%	--
1	11	26%	17%
2	6	14%	19%
3	4	10%	19%
4	3	7%	19%
5	2	5%	16%
6	1	2%	10%
7 or more	0	0%	--
Total	42	100%	100%

* In one project the participants and non-participants were not equivalent in ethnic composition.

TABLE 50

COMPARISON OF AVERAGE NUMBER OF 9TH GRADE PARTICIPANTS PER PROJECT TO THE AVERAGE OF THE 10 MOST FAVORABLE PROJECTS, BY PROGRAM YEAR

	Average Enrollment		
	PY I	PY II	PY III
All Projects: Average Number of Junior High Participants/Project	1215	1416	1611
10 Most Favorable Projects: Average Number of Junior High Participants/Project	474	612	806
Difference	741	804	805
Percent Fewer Participants in 10 Most Favorable Projects	61%	57%	50%

3. Senior High Level

a) Work Experience Group

At the senior high school level there were 19 projects for which comparisons between participating Work Experience students and non-participating Work Experience students were made. Differences between participants and non-participants were observed on seven outcome questions. As can be seen in Table 51, seven, or 37% of the projects accounted for all of the favorable answers found.

TABLE 51

NUMBER OF PROJECTS BY NUMBER OF OUTCOME QUESTIONS ON WHICH 12TH GRADE WORK EXPERIENCE PARTICIPANTS SOCRED SIGNIFICANTLY BETTER THAN NON-PARTICIPANTS

Number of Questions	Number of Projects	Percent of Projects	Percent of Favorable Answers
0	12	63%	--
1	1	5%	6%
2	3	16%	38%
3	3	16%	56%
4 or more	0	0%	--
Total	19	100%	100%

These seven projects reported an average number of participants per project that was smaller than the average for all projects. This is shown in Table 52. An average of 8% fewer participants in the 7 most favorable projects than in all projects was found in the first year. There were 15% fewer in the second year, and 21% fewer in the third year.

TABLE 52

COMPARISON OF AVERAGE NUMBER OF 12TH GRADE WORK EXPERIENCE PER PROJECT TO THE AVERAGE FOR THE 7 MOST FAVORABLE PROJECTS, BY PROGRAM YEAR

	Average Enrollment		
	PY I	PY II	PY III
All Projects: Average Number of Work Experience Participants / Project	84	110	128
Most Favorable Projects: Average Number of Work Experience Participants / Project	77	94	101
Difference	7	16	27
Percent Fewer Participants in 7 Most Favorable Projects	8%	15%	21%

b) Skill Training Group

Of the 14 projects for which comparison data were available, skill training participants scored better than non-participants on one question in six projects. In eight projects Skill Training participants did not do better than non-participants on any outcome variable. These data are shown in Table 53.

TABLE 53

NUMBER OF PROJECTS BY NUMBER OF OUTCOME QUESTIONS IN WHICH 12th GRADE SKILL TRAINING PARTICIPANTS SCORED SIGNIFICANTLY BETTER THAN NON-PARTICIPANTS

Number of Questions	Number of Projects	Percent of Projects	Percent of Favorable Answers
0	8	57%	--
1	6	43%	100%
2 or more	0	0%	0%
Total	14	100%	100%

A comparison of the average number of Skill Training participants per project in those six projects where a favorable answer was found with all projects reveals a considerable difference. As shown in Table 54, in those projects with a favorable answer, the average number of participants per project is much higher than the overall average of Skill Training participants per project.

TABLE 54

COMPARISON OF AVERAGE NUMBER OF 12TH GRADE SKILL TRAINING PARTICIPANTS PER PROJECT TO THE AVERAGE FOR THE 6 MOST FAVORABLE PROJECTS, BY PROGRAM YEAR

	Enrollment		
	PY I	PY II	PY III
All Projects: Average Number of Skill Training Participants/Project	338	408	355
Average Number of Skill Training Participants for 6 Projects with Favorable Findings	564	740	735
Difference	226	332	380
Percent More Participants in Favorable Projects	67%	81%	107%

The six favorable projects averaged 67% more Skill Training participants per project than the overall project average for the first year. The difference between these six and overall project averages increased each program year with the six projects having an 81% higher average the second year and a 107% higher average the third year. This enrollment trend is even more striking in view of the fact that for the three years the average number of Skill Training participants over all projects increased only 5%, while for these six projects the number of such participants increased by 30% during the same three-year period.

c) Participating Teacher Group

There were 23 projects for which comparison data between the 12th grade Participating Teacher group participants and non-participants were reported. Table 55 indicates the number of projects by number of outcome questions on which participants scored significantly better than non-participants. Participants did significantly better than non-participants with respect to one or more of the outcome questions in 13 projects, or 57% of the total. In addition, five of the projects (22%) contained 70% of the favorable findings.

TABLE 55

NUMBER OF PROJECTS BY NUMBER OF OUTCOME QUESTIONS IN WHICH 12TH GRADE PARTICIPATING TEACHER GROUP SCORED SIGNIFICANTLY BETTER THAN NON-PARTICIPANTS

Number of Questions	Number of Projects	Percent of Projects	Percent of Favorable Answers
0	10	43%	--
1	8	35%	30%
2	1	4%	7%
3	1	4%	11%
4	2	9%	30%
5	0	--	--
6	1	4%	22%
7 or more	0	0%	--
Total	23	100%	100%

The average number of students in the 12th grade Participating Teacher group did not noticeably increase or decrease during the three year term of Part D program support. However, for the five most favorable projects the average number of students per project increased 153% over the three year period. As shown in Table 56, the average number of participants in these projects was 61%, 23%, and 1% fewer than the average for all projects in year I, II, and III, respectively.

TABLE 56

COMPARISON OF AVERAGE NUMBER OF 12TH GRADE PARTICIPATING TEACHER PARTICIPANTS PER PROJECT TO THE AVERAGE FOR 5 MOST FAVORABLE PROJECTS, BY PROGRAM YEAR

Reporting Category	Average Enrollment		
	PY I	PY II	PY III
All Projects: Average Number of Familiarization Participants/Project	675	685	673
Average Number of Familiarization Participants for 5 Most Favorable Projects	263	528	666
Difference	412	157	7
Percent Fewer Participants in Most Favorable Projects	61%	23%	1%

The five projects reflect a pattern of student participation which is similar to the overall pattern found at the elementary and junior high school levels. This, however, is not the case for the total group of projects having 12th grade students in the Participating Teacher group.

d) Counseling Group

There was one project in which 12th grade counseling group participants did better with respect to one research question. Analysis produced no significant insights with respect to this area.

D. Summary and Conclusions

The findings presented relative to the program treatment questions established at the start of the study indicate that, with respect to the overall analyses of projects, projects tended to provide participating students with significantly more classroom experiences conceptually associated with career education and occupational familiarization student outcomes than were provided non-participants. In practice, however, no relationship was found beyond the level of chance between student responses regarding these treatments and student outcome results. Similarly, no relationship between responses of counselors and teachers and student outcomes presumed to be associated with these responses could be clearly established.

The search for explanations did, however, reveal that a relationship exists between the scope of the projects in terms of number of participants and measures of student outcomes. Specifically,

- at the 6th grade and at the 9th grade, the average number of students served by the 10 projects with the greatest number of favorable student outcomes was less than the average number served by all projects;
- for the Work Experience group, the average number of students served by the seven projects with significant outcomes was less than the average number served by all projects;
- for the Skill Training group, the average number of students served by the six projects with significant outcomes was considerably greater than the average number served by all projects; and
- for the Participating Teacher group the average number of students served by the five projects with the greatest number of favorable student outcomes increased 153% from Year I to Year III, compared with no net change in the average number served by all projects.

These findings will be related to cost information in the next chapter in an effort to further explain the results.

CHAPTER X: COST ANALYSIS

A. Introduction

In Chapter V, project budget and expenditure information was used to describe and compare the planned federal inputs to the inputs that actually occurred during the three-year term of the first round of the Part D program. From that data it was concluded that for most projects the inputs did not occur at the level planned.

Another use of cost data is as an indicator of effectiveness or efficiency when comparing programs or performance over time. In this chapter, additional cost data is presented and analyzed in an effort to develop further insights relative to program efficiency and effectiveness.

In recent years cost analysis techniques, especially with regard to educational programs, have become increasingly sophisticated. They all have as their purpose, however, providing data which permits managers, planners, and policy makers to compare alternatives and make decisions concerning the best use of resources based upon past performance. The following discussion does not rely on any one technique of cost analysis, cost-effectiveness, or cost-benefit analysis. Rather, it is an attempt to provide, for management, planning, or policy making purposes, useful information concerning the three-year performance of Part D projects with regard to program costs.

Attempts to secure useful cost data during the field tests of instruments and procedures revealed that adequate cost data were difficult to acquire in many instances. Several factors were involved:

- Many projects did not use budget-expenditure data as a management tool on a regular basis. This resulted in program staff frequently being unfamiliar with budget and expenditure issues.
- Grantees usually were not able to break out the costs of a given activity.
- Grantees frequently had difficulty describing funds from local sources that were applied to support project activities.
- Grantees frequently could not clearly describe project activities or participants.

Because of these problems, cost data were sought in two simplified forms. Budget and expenditure data were sought according to the categories contained in the USOE Sample Budget contained in the publication of Instructions and Procedures for Proposing and Conducting Part D Exemplary Programs. It was felt that this type of data would be relatively uniform across projects and easy to obtain since this was the format utilized by the grantee in requesting funds and by USOE in granting them. It was expected that most grantees either would have information in this form or could develop it in this form with little difficulty. Summaries of this information were presented in Chapter V. In addition, in order to make comparisons across projects, it was decided to attempt to secure expenditure information by the seven activity areas being studied.

As noted earlier, there was wide variation in activities from one project to another and definitions of activities and/or participants frequently were quite vague. Based upon the results of the field tests, it was concluded that activity cost data would, of necessity, be based on estimates provided by project and grantee staff. Further, it was concluded that the level of detail sought with respect to activity costs would have to be limited to two broad categories: personnel costs and other costs. These data were sought for each year of project operation on a program year basis. As expected, the projects spent the great bulk of the Part D funds for personnel. Since this pattern was similar for all projects, this chapter largely focuses on data for the activity areas utilizing total costs within each activity area.

B. Findings: Cost in Relation to Project Activities

Overall budget and expenditure data were reported in Chapter V (see Table 7). In brief, that Chapter pointed out that 39 projects reported that they underspent their first year budgets by an average of 19.2% per project. For the second year, 38 projects reported an average underexpenditure of 16.0%, and for the final program year the underexpenditure averaged 12.1% for the 16 underexpending projects.

In addition to overall budget and expenditure data, projects were asked to provide an estimate on the cost of project activities in terms of the seven activity areas outlined in the legislation. Forty-three of the fifty projects studied (86%) provided these estimates.

The estimates are presented in Table 57 by activity area for each of the three years of Part D funding support. Activity costs are expressed as a percentage of the total Part D expenditures for the program year. This presentation format was adopted when review and analysis revealed that many projects were not able to provide dollar estimates.

1. Elementary Activities (Grades 1-6)

Thirty-eight projects reported elementary activity expenditures in their first program year. These projects reported an average percentage equaling 28.8% of their Part D expenditures for these activities. The 40 projects reporting elementary activities expenditures in the second year spent an average percentage of 24.8%. In the third year, the 35 projects reporting elementary expenditures reported spending an average percentage of 24.5% of Part D expenditures on activities at this level. *

Four of forty-three projects providing activity cost estimates for the first program year reported no expenditure of Part D monies for elementary activities. Of these four, one reported second year expenditures for elementary activities and one reported such expenditures for the third program year. The remaining two reported no elementary school activities during the three-year term of Part D funding. One project reported expenditures for elementary activities during the first two program years but not the third. It was the only reporting project where expenditures were terminated once initiated.

Table 58, page 121, compares the average percent of the total Part D project cost reported for elementary school activities by program year and the average number of elementary school participants per project. Seven of the fifty projects did not report expenditure data by activity area. An inspection of the number of participants, total annual budget and expenditure data, and other available information indicate that the averages presented here are an accurate reflection of average proportional project cost for these activities.

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* The lower number of projects reporting elementary activity expenditures in the third year is attributed to fewer projects reporting for this year rather than a lower level of elementary activity.

TABLE 57

ACTIVITY COSTS AS A PERCENT OF TOTAL FEDERAL COSTS, BY YEAR

Activity Areas / Project	First Program Year Percentages							Second Program Year Percentages							Third Program Year Percentages						
	Elem.	Jr. H.	Work Exp.	Skill Trg.	Part. Teach.	Couns.	Other	Elem.	Jr. H.	Work Exp.	Skill Trg.	Part. Teach.	Couns.	Other	Elem.	Jr. H.	Work Exp.	Skill Trg.	Part. Teach.	Couns.	Other
Alabama	Not Provided																				
Alaska	3.4	3.4	3.4	0	0	0	89.7	17.3	3.0	3.0	0	0	0	79.5	12.3	13.3	13.6	0	0	0	60.8
Arizona	29.8	33.2	0	0	0	0	37.0	26.9	39.8	0	0	0	0	33.3	Not Available						
Arkansas	13.6	27.3	18.1	0	13.6	27.3	0	7.6	18.1	30.5	0	7.6	36.2	0	7.7	15.4	30.8	0	15.4	30.8	0
California	22.4	6.5	3.7	11.5	11.2	9.6	35.1	18.1	8.9	7.7	7.8	13.5	16.5	27.5	Not Applicable						
Colorado	6.4	6.4	0	0	6.4	0	80.9	6.4	6.4	0	0	6.4	0	80.9	6.4	6.4	0	0	6.4	0	80.9
Connecticut	Not Available							15.0	15.0	20.0	10.0	20.0	0	20.0	15.0	15.0	20.0	10.0	20.0	0	20.0
Delaware	33.6	33.6	26.6	1.5	0.8	0.8	0	35.5	35.5	27.9	2.2	1.1	5.6	0	33.8	33.8	29.3	0.8	0.4	2.0	0
District of Columbia	44.1	55.9	0	0	0	0	0	44.1	55.9	0	0	0	0	0	44.1	55.9	0	0	0	0	0
Florida	30.0	15.0	10.0	25.0	5.0	5.0	5.0	25.0	20.0	20.0	20.0	5.0	5.0	5.0	Not Available						
Georgia	35.1	38.5	0	0	23.7	2.6	0	34.0	31.0	0	0	29.0	3.0	0	41.0	28.0	0	0	27.0	3.0	0
Idaho	8.1	9.1	4.8	25.0	2.4	17.5	32.0	6.0	7.0	0	42.0	5.0	14.8	24.4	6.0	7.0	0	33.0	5.0	17.3	28.0
Illinois	20.7	0	79.3	0	0	0	0	18.5	0	81.5	0	0	0	0	10.7	0	89.3	0	0	0	0
Indiana	5.0	95.0	0	0	0	0	0	5.0	95.0	0	0	0	0	0	5.0	95.0	0	0	0	0	0
Iowa	15.1	32.3	0	0	52.6	0	0	16.7	29.8	0	0	53.5	0	0	18.1	28.2	0	0	53.7	0	0
Kansas	42.5	42.5	5.0	5.0	5.0	0	0	37.5	37.5	8.3	8.3	8.3	0	0	37.5	37.5	6.3	6.3	6.3	6.3	0
Kentucky	92.6	0	0	0	0	7.4	0	10.7	74.6	0	0	10.1	4.6	0	10.5	16.8	0	10.8	55.6	6.3	0
Louisiana	16.6	23.1	0	60.0	0	0	0	14.9	37.7	0	47.3	0	0	0	15.3	38.5	0	46.1	0	0	0
Maine	Not Provided																				
Maryland	17.7	36.5	0	0	0	13.8	32.1	18.5	48.5	0	0	0	12.6	20.4	17.4	41.7	0	0	0	8.0	32.9
Massachusetts	0	0	0	0	0	0	100.0	0	0	0	0	0	0	100.0	0	0	0	0	0	0	100.0
Michigan	Not Provided																				
Minnesota	27.9	0	10.4	0	0	30.3	31.4	27.8	8.2	9.5	0	0	27.8	26.7	30.0	8.7	8.7	0	0	23.4	29.2
Mississippi	24.9	29.9	9.9	9.9	11.9	9.9	2.9	25.0	29.9	9.9	9.9	11.9	9.9	2.9	24.9	29.9	9.9	9.9	11.9	9.9	2.9
Missouri	Not Provided																				
Montana	Not Provided																				
Nebraska	22.1	22.1	0	7.9	47.7	0	0	34.9	22.8	0	7.4	34.7	0	0	22.0	22.0	0	6.9	49.0	0	0
Nevada	Not Provided																				
New Hampshire	20.0	15.0	0	25.0	15.0	20.0	0	24.0	14.0	0	24.0	14.0	24.0	0	24.0	14.0	0	24.0	14.0	24.0	0
New Jersey	Not Provided																				
New Mexico	24.8	24.8	24.8	0	0	24.8		20.6	20.6	20.6	0	0	20.6	17.4	19.7	19.7	19.7	0	0	19.7	20.8
New York	19.6	19.6	0.8	48.7	8.2	3.1	0	20.0	20.0	0.5	19.5	20.0	20.0	0	10.0	11.0	8.5	17.8	20.3	32.3	0
North Carolina	15.0	15.0	20.0	15.0	25.0	10.0	0	15.0	15.0	20.0	15.0	25.0	10.0	0	15.0	15.0	20.0	15.0	25.0	10.0	0

TABLE 57 (cont)

ACTIVITY COSTS AS A PERCENT OF TOTAL FEDERAL COSTS, BY YEAR

Activity Areas / Project	First Program Year Percentages							Second Program Year Percentages							Third Program Year Percentages						
	Elem.	Jr. H.	Work Exp.	Skill Tng.	Part. Teach.	Couns.	Other	Elem.	Jr. H.	Work Exp.	Skill Tng.	Part. Teach.	Couns.	Other	Elem.	Jr. H.	Work Exp.	Skill Tng.	Part. Teach.	Couns.	Other
North Dakota	33.8	29.7	0	0	29.7	0	0	33.2	31.2	0	0	30.3	5.4	0	30.8	32.6	0	0	30.6	0	0
Ohio	100.0	0	0	0	0	0	0	80.2	10.5	0	0	9.3	0	0	48.2	23.0	0	0	25.8	0	0
Oklahoma	5.0	39.7	0	36.0	10.9	7.8	0	15.4	21.0	0	27.0	8.0	27.5	0	15.7	23.5	0	25.7	12.4	22.3	0
Oregon	23.5	23.5	15.2	0.9	37.0	0	0	14.8	20.2	22.5	1.8	40.6	0	0	17.9	36.2	14.1	1.6	20.2	0	0
Pennsylvania	24.9	50.0	24.9	0	0	0	0	24.9	49.9	24.9	0	0	0	0	24.9	49.9	24.9	0	0	0	0
Rhode Island	24.2	28.0	25.7	2.4	8.1	6.3	5.0	21.0	22.3	29.9	2.4	10.3	8.4	5.9	25.1	25.1	32.8	2.6	0	8.3	6.2
South Carolina	8.9	0	36.2	0	14.9	6.4	33.6	2.9	0	14.2	0	21.8	7.6	53.5	0	2.0	19.3	0	27.0	0	51.8
South Dakota	39.4	25.6	14.8	0	20.2	0	0	37.3	31.2	14.9	0	16.5	0	0	34.7	28.9	17.6	0	18.8	0	0
Tennessee	40.0	15.0	10.0	20.0	15.0	0	0	40.0	15.0	10.0	20.0	15.0	0	0	40.0	15.0	10.0	20.0	15.0	0	0
Texas	50.1	30.0	0	2.0	0	17.0	1.0	50.0	29.9	0	1.9	0	16.9	1.0	49.9	29.9	0	1.9	0	16.9	1.0
Utah	0	28.0	0	0	0	0	72.4	0	34.3	0	0	0	0	65.7	0	21.4	0	0	0	0	78.6
Vermont	20.5	12.3	1.9	47.1	0.6	0	17.6	26.1	9.9	6.8	43.0	6.0	2.6	4.9	Not Available						
Virginia	0	0	0	0	0	0	100.0	12.1	1.3	0.7	0	1.4	1.8	82.8	13.3	0	2.8	0	7.0	2.2	74.8
Washington	8.6	43.6	0	47.7	0	0	0	16.3	41.8	0	41.8	0	0	0	Not Available						
West Virginia	89.7	5.1	0	0	0	5.1	0	43.3	28.3	9.4	9.4	0	9.4	0	28.3	28.3	10.8	10.8	10.8	10.8	0
Wisconsin*	0	0	0	0	0	0	0	0	100.0	0	0	0	0	0	41.8	41.8	0	0	16.4	0	0
Wyoming	33.3	33.3	8.6	8.6	16.0	0	0	31.8	36.3	8.7	8.7	14.3	0	0	40.3	35.6	2.3	2.3	19.3	0	0

* First year funds reported for teacher training only.

TABLE 58
COMPARISON OF ELEMENTARY ACTIVITIES VERSUS COSTS

	Program Year I	Program Year II	Program Year III
Average Percent of Total Part D Projects Costs	28.8	24.8	24.5
Average Number of Elementary Participants per Project	1,709	1,977	2,512

As indicated in the table, during the third year projects reported that 24.5% of the Part D funds were devoted to elementary school activities. On the other hand, elementary school participants accounted for 51.9% of the total number of Part D participants in all projects.

Six projects reported elementary school activity expenditures during the first project year and no elementary school participants for that year. This may be explained, in part, by the nature of the start-up activities employed by the projects. These projects reported that the first program year was devoted to curriculum development, material development, and staff development and training. One project reported that high initial staff turnover was also a factor in the lack of student involvement the first year.

Table 58 clearly shows that with each year proportional costs decreased while participants increased. Part of the increase in participants is accounted for by projects which had previously reported expenditures for planning and start-up purposes and were now reporting participants. This is particularly true for the first year/second year figures. The third year figures, on the other hand, appear to reflect greater efficiency in the delivery of program services.

2. Junior High School Activities (Grades 7 - 9)

From Table 57, it can be seen that 34 projects reported first year costs for junior high school activities. The average percentage spent on these activities for those reporting was 29.3% of the total Part D project cost. Thirty-nine projects reported second year junior high school activities at an average percentage of 31.0%. For the final year, 36 projects reported expending an average of 27.6% of their total project cost at the junior high school level while serving 33.5% of all third year project participants.

Eight of the projects providing activity cost estimates indicated that no funds were devoted to junior high school activities the first year. Three of these did not indicate expenditures during the second year. One project indicated expenditures in this activity area for the final year only, and two projects reflect no junior high activity costs for all three years. One project reported costs only in the second year.

Table 59 compares the average cost of junior high school activities expressed as a percent of the total project cost (Part D funds only) to the average number of junior high school participants for each year of Part D support.

TABLE 59

COMPARISON OF JUNIOR HIGH SCHOOL ACTIVITIES VERSUS COSTS

	Program Year I	Program Year II	Program Year III
Average Percent of Total Part D Project Costs	29.3%	31.0%	27.6%
Average Number of Participants per Project	1,215	1,416	1,611

As was the case with elementary activities, there was an increase in the average number of participants per project for each of the three years of Part D support. Proportional costs did increase slightly in the second year but in the third year decreased below the first year level. This pattern also appears to reflect the effect of both planning and start-up costs in early years and program efficiency in the third year.

3. Senior High School Activities (Grades 10 - 12)

Of the 43 projects reporting cost estimates, 39 reported first year senior high school activity costs. Table 60, below, indicates the average Part D cost of all high school activities as a percent of the total Part D project cost. The average number of high school participants per project is also shown in the table.

TABLE 60

COMPARISON OF THE TOTAL SENIOR HIGH SCHOOL ACTIVITIES VERSUS COSTS

	Program Year I	Program Year II	Program Year III
Average Percent of Total Part D Project Costs	42.1%	44.2%	47.9%
Average Number of Participants per Project	552	668	723

Senior high participants accounted for 14.7% of the total third year Part D project participants. However, senior high school activities were reported to have accounted for 47.8% of the total Part D project costs.

Unlike the elementary and junior high levels, both the percentage of costs and participants increased yearly for the high school level. Thus, it appears that high school activities involved relatively fewer planning and start-up costs and the addition of new participants was fully funded. In addition, it would appear that program efficiencies did not occur at the high school level.

These data would suggest that in general the three year experience with respect to elementary level programming and junior high level programming was similar and that both varied considerably from the overall three year experience at the high school level. The components of the high schocl effort are discussed on the following page.

a) High School Work Experience Activities

High school participants accounted for almost 15% of all Part D participants during the third year. During that same year, high school work experience participants were reported to represent 8.4% of all high school participants, or 1.2% of total participants.

Projects reporting work experience activity costs reported that on the average 16.9% of the projects' Part D expenditures were devoted to these activities the first year, 17.5% was reported for the second year, and 19.5% the final year. (See Table 61, below.) The projects reporting work experience participants reported an average of 84 per project for the first year, 104 the second year, and 128 the third year.

TABLE 61
COMPARISON OF WORK EXPERIENCE ACTIVITIES VERSUS COSTS

	Program Year I	Program Year II	Program Year III
Average Percent of Part D Project Cost	16.9%	17.5%	19.5%
Average Number of Participants per Project	84	110	128

From Table 57, it can be seen that considerable variation exists in the percent of Part D funds devoted to work experience activities. Frequently, this variation is due to the nature of the activities included in the work experience component. Some projects were able to expand pre-existing work experience activities to include project participants or to meet project needs. Others attempted to utilize personnel on a limited basis to provide work experience opportunity for a limited number of participants. These projects typically did not report work experience costs exceeding 10% of the total project costs. Some projects employed work experience coordinators or job placement specialists on a full-time basis to implement the project work experience component. Where this occurred, the projects reported work experience activity costs that ranged from 15 to 25% of the total project costs.

One project included intensive skill training and counseling as an integral part of the work experience component. All participants were provided with all treatments and no other students were involved in the project even in a limited way. As would be expected, this intensive approach was also relatively expensive, and this project reported the highest percent cost of work experience activities of the projects studied (89.3%).

With only two exceptions, projects reporting costs for work experience activity did so for all three years; all of them reported such costs for the final two years. The three year trend shown in Table 61 indicates that projects devoted a slightly larger percent of their total budget to work experience activities and tended to involve more students in these activities each year. This reflects the overall trend for all high school activities.

b) High School Job Entry Skill Training

A total of 22 projects reported Part D job entry skill training costs as part of the total Part D project costs. These projects reported that skill training activities accounted for an average of 21% of the first year Part D project costs; 17.6% of second year costs, and 13.6% of third year costs. Table 52 compares the average percentage of costs by year to the average number of skill training participants for the same period.

TABLE 62
COMPARISON OF SKILL TRAINING ACTIVITIES VERSUS COSTS

	Program Year I	Program Year II	Program Year III
Average Percent of Total Part D costs	21.0%	17.6%	13.6%
Average Number of Participants per Project	338	408	355

During the third year, skill training participants comprised 19.8% of all high school participants in the projects studied and 2.9% of all participants. As can be seen from the table, projects reported that skill training activities accounted for progressively smaller percentages of the total project costs while the average number of skill training participants remained much the same between the first year and the third, with a slight increase during the second year.

As indicated by the reported activity costs, skill training activities, where they were undertaken, tended to be three year efforts. Only two projects reporting costs indicated these costs for fewer than three years; one for the final two project years, and the other for only the last project year.

c) Senior High School Familiarization Through Infusion by Participating Teachers

Over one-half of the third year high school participants (53.5%) were involved in occupational familiarization or orientation activities provided by participating teachers. This represents 7.8% of all reported third year participants.

Thirty-one projects reported high school participants in this treatment area. Of these, 29 provided activity cost estimates. From the information provided it was found that these activities constituted an average of 16.6% of the total first year Part D costs. For the second year the figure was found to be 15.3% and for the third year it was 20.5% of the total. From Table 63, below, it can be seen that the average number of students remained stable over the three project years.

TABLE 63
COMPARISON OF FAMILIARIZATION ACTIVITIES VERSUS COSTS

	Program Year I	Program Year II	Program Year III
Average Percent of Total Part D Costs	16.6%	15.3%	20.5%
Average Number of Participants per Project	675	685	673

The three-year trend indicates essentially no change in the average number of participants from year to year. During that period, projects indicated an overall increase in the average percent of total expenditures devoted to high school familiarization activities with the second year being slightly below the figure reported for the first year.

It was observed earlier that with four exceptions the work experience and skill training activity costs tended to be reported for the full three year period of Part D support. High school familiarization activities provided by teachers, however, tended to follow the more variable pattern evidenced at the elementary and junior high levels. Five of the projects reporting elementary activity costs in this area reported no costs in the first year. Two of these indicated third year costs only. This would suggest that projects required more in the way of start-up time for familiarization activities at all levels than for work experience and skill training activities. This is at least in part explained by the newness of the familiarization activities; projects reported that to implement these activities required devoting considerable time and resources to planning, material and curricula development, and staff training. Work experience programs and job entry skill training programs, which were frequently included in the traditional curricula, did not require as much time for these preparatory activities. Thus, projects were able to expand or "buy into" ongoing skill training or work experience efforts, and required little by way of start-up and development costs.

d) High School Occupational Counseling and Guidance Activities

Eighteen projects reported third year expenditures for high school level occupational counseling and guidance activities. Participants in these activities represented 14.3% of the total third year high school participants and 2.1% of all the third year Part D participants. As shown in Table 64, projects reported that both costs and participants for counseling and guidance activities gradually increased each year with the greatest increase occurring between years one and two.

TABLE 64
COMPARISON OF COUNSELING AND GUIDANCE ACTIVITIES VERSUS COSTS

	Program Year I	Program Year II	Program Year III
Average Percent of Total Part D Costs	11.5%	13.2%	14.3%
Average Number of Participants per Project	427	597	625

Some grantees were found to have employed new personnel to initiate occupational guidance or placement activities. Some projects emphasized occupational guidance at the high school level as opposed to infusion activities. These projects tended to report higher proportional costs for these activities than other projects. Generally, these projects are the ones reporting counseling and guidance costs in excess of 15% of the total project costs.

Several projects attempted to involve the regular counseling staff in occupational guidance or in group career education activities. This approach was usually aimed at involving greater numbers of guidance personnel than the approaches described above. Projects taking this approach tended to report lower costs, i.e., 5 to 10% of the total budget.

e) Other Project Activities

Nineteen projects reported significant project activities that could not be described as belonging to any of the above activity areas. Some 3.9% of the total high school level participants were involved in these activities. This represents 0.6% of the total third year Part D participants.

Of the 19 projects, there were five which reported activities directly treating students. These activities cost an average of 88.6% of the total project costs the first project year. For these projects the second year costs averaged 81.8% and averaged 79.0% the final year. In each of the projects the activities related to the creation of an alternative high school setting for dropouts, potential dropouts, or individuals whose educational needs were not being met by the traditional educational delivery system.

From Table 65 it can be seen that the number of participants per year for these activities was low in four of the five projects, and that their cost was a much greater proportion of total project costs than for the high school activities reported earlier. The relatively high costs are explained by the unique nature of these activities. They were innovations that could not easily tie into ongoing activities, and they were carried on in a setting outside that of the traditional educational delivery system. Thus, they were not amenable to the use of regularly employed grantee staff on a part-time basis. They were also comprehensive in nature, attempting to meet the total educational needs of the participants involved. For these reasons, they were relatively expensive when compared to other Part D activities.

TABLE 65
"OTHER" PROJECT ACTIVITIES
Comparison of Participants to Percent Cost of Activity, by Project

	Projects				
	I	II	III	IV	V
Project Year I:					
Number of Participants	0	700	0	191	156
Percent of Part D Costs	89.7%	80.9%	100%	72.4%	100%
Project Year II:					
Number of Participants	70	600	36	232	201
Percent of Part D Costs	79.5%	80.9%	100%	65.7%	82.8%
Project Year III:					
Number of Participants	90	600	60	180	180
Percent of Part D Costs	60.8%	80.9%	100%	78.6%	74.8%

No general pattern of increase or decrease in the number of participants is evident for these activities. Also, no such patterns emerged with respect to percent cost of these activities. Two projects reported no change in percent of total Part D costs during the three year period, while another two indicated decreases. In one the decrease represented use of another grant to add a K through 12 program to the original program; the other project simply devoted more resources to its elementary school activities.

Three of the nineteen projects with "other" activities reported efforts which could not be related to specific students; while these costs were greatly below the five discussed above, they represented a sizeable proportion of total project expenditures. The cost of these activities was reported to be in the range of 30 to 35% of the total Part D cost for each project. One of the projects reported the costs of developing a career education TV film and holding a state career education conference. Another project reported a summer orientation and field trips to industry program, as costs in this area. The third project reported the development of an occupational information media center in this category. One of these projects identified some 350 participants but only for one summer. One indicated a "potential" number of participants and the remaining project could not estimate impact of these activities.

The remaining 11 projects reported costs in the "other" activity cost category that did not reflect any student related activities. Usually these costs included administrative costs, evaluation costs, or teacher training costs. The range of these costs ran from a high of 100% of the project costs to 1% of the total.

4. Summary of Cost of Project Activities Findings

Table 66 compares the third year activity costs with the third year participants. As above, the costs are expressed as the average percent of total project costs devoted to the given activity for projects reporting that activity. Participants are expressed as a percent of the total number of third year Part D project participants.

TABLE 66
THIRD YEAR COST AND NUMBER OF PARTICIPANTS AS PERCENTS OF PROGRAM TOTALS

	Activities		
	Elementary	Junior High	All Senior High
Average Percent of Total Part D Cost	24.5%	27.6%	47.9%
Percent of Total Participants	52.2%	33.5%	14.4%

	Senior High Subcategories *				
	Work Experience	Skill Training	Participating Teacher	Participating Counselor	Other
Number of Projects Reporting	26	23	31	22	8
Average Percent of Total Part D Cost	19.5%	13.6%	20.5%	14.2%	71.3%
Percent of Total Participants	1.2%	2.9%	7.8%	2.1%	0.6%

* Because not all projects had all activities, it is not appropriate to add across columns.

It can be seen that elementary school participants comprised 52.2% of the total third-year Part D participants and that projects reported that elementary school activities cost an average of 24.5% of the total project costs for that year. Junior high school activities required an average of 27.6% of project Part D resources to treat 33.5% of the participants; 47.9% of the Part D project costs were devoted to high school level activities that in total affected only 14.4% of the third-year participants.

During the three-year period of Part D funding, projects clearly reserved the largest share of their resources for high school activities and the smallest for elementary activities. The three-year trend was to decrease the proportion of resources devoted to elementary and junior high activities and to increase the proportion for high school activities.

The decrease was sharpest for elementary activities during the second year with the expenditures only slightly lower the third year. At the junior high level there was a second year increase with a decrease the final year. From this it would appear that projects tended to emphasize elementary activities the first year and junior high activities the second. Expenditures for senior high school activities were expanded as the others were decreased

At the high school level projects reporting "other activities" tended to devote most of their Part D resources to those activities. High school familiarization activities designed to infuse career education concepts into the regular curricula and work experience activities ranked next, and were reported to cost projects approximately 20% of their third year expenditures. Counseling and guidance activities and job entry skill training activities followed at a reported cost to projects with those components of 14.2% and 13.6%, respectively.

During the course of the three year effort the resources expended for skill training activities decreased significantly. Skill training activities supported with project Part D funds were the only high school activities that reflected a decrease during both the second and third years. The three year rate of decrease was over twice that of elementary activities. This was the highest rate of overall decrease indicated for all activity areas.

Interestingly, infusion activities by participating teachers at the high school level were reported to have a lower percentage of support the second project year than during the first year. A substantial increase in percentage was reported for the third year. This change, from 15.3% to 20.5%, was the largest single year change reported for any activities.

Overall, projects reported an increase in the average number of participants for each activity during the three-year term of Part D support with the exception of high school infusion activities. In this area, the number of participants was virtually the same in the third year as in the first year. The number of third year participants was reported to be below the second year figure by an average of 12 participants per project. This means that during the third year this activity was reported to cost project over 1/3 more, proportionately, while the number of participants involved actually decreased slightly. There was no other activity area showing an overall decrease in the number of students participating, and only one other for which a one-year reduction was indicated. This was job entry skill training, where a reduction in percentage of funds was reported for the third year, from 17.6% to 13.6%, coupled with a 13% reduction in the average number of participants.

Elementary school participants were reported to have been increased by an average of 47% per project during the three years of Part D support. For the same period projects reported a decrease in the proportion of Part D resources devoted to these activities, from 28% to 24.5%. The average number of junior high school participants increased by nearly 33% while the proportion of the Part D expenditures directed at these activities was reduced slightly (from 29.3% to 27.6%). At the senior high school level an average 31% increase in participants was reported coupled with an increase in the proportion of funds devoted to these activities, from 42.1% to 47.9%.

A review of the activities at the high school level reveals that work experience activities had the highest rate of increase in average number of participants for the three years. With the lowest average number of participants per project reported during the first year, there was a 52% increase by the third year. The average costs went from 16.9% to 19.5%. Counseling and guidance activities reflected a 46% increase in the average number of participants during the three years, coupled with an increase in percent of costs from 11.5% to 14.3%. Skill training activities, as indicated earlier, were reported to have experienced an overall 5% increase in participants.

The figure below rank orders activities by year from highest to lowest, according to the average relative cost of activity. This figure graphically illustrates the third year shift in activity expenditure emphasis at the high school level.

RANK ORDER OF AVERAGE HIGH SCHOOL ACTIVITY COST, BY YEAR

Rank	Program Year I	Program Year II	Program Year III
1 (high)	Skill Training	Skill Training	Participating Teacher
2	Work Experience	Work Experience	Work Experience
3	Participating Teacher	Participating Teacher	Counselors and Guidance
4 (low)	Counseling & Guidance	Counseling & Guidance	Skill Training

FIGURE 6

It is apparent that the third year saw a shift in emphasis toward classroom familiarization and occupational guidance and counseling and away from skill training. One possible explanation for this relates to the general availability of skill training resources in most areas. Projects may have elected to rely on traditional training resources, making them available to students not taking a full vocational course of training, thereby freeing resources for other activities.

Another factor that may be involved is the relative cost of skill training and work experience activities when compared to the others. Both are decidedly more expensive when a cost per pupil ratio is applied. Classroom infusion techniques and the guidance approach to career education have the potential of touching many more students at a lower cost ratio. That work experience activities did not show a similar reduction would seem to be a function of the limited resources for these activities available from other sources in many of the grantees. Below we present an analysis of these cost findings by relating them to the results obtained for outcome questions.

C. Results and Conclusions on Cost/Outcome Findings

In Chapter IX it was shown that some projects were more effective in producing student outcomes for a given activity than were others. When these projects' average number of participants per year for these activity areas was compared to the overall average per project for the same activities, it was found that the projects differed from the average in number of participants per project for a given activity and/or in the rate of change in the number of participants in the activity from one year to the next. A similar analysis of these projects with respect to cost was also carried out. The results of this analysis are reported below for each activity area.

1. Elementary Activities

The ten projects with the most favorable responses with respect to student outcomes at the elementary level were found to have a lower average number of elementary participants per year than was reported across all projects. While averaging fewer elementary participants per year, these projects reported a higher proportion of expenditures devoted to elementary activities than was reported for all projects, as indicated in Table 67, below.

TABLE 67

Comparison of Average Percent of Total Expenditures for Elementary Activities Per Project to the Average for the 10 Most Favorable Projects

Reporting Category	Average % of Total Expenditures		
	Year I	Year II	Year III
10 Most Favorable Projects	39.1	31.8	30.3
Overall Average Per Project	28.8	24.8	24.5

2. Junior High School Activities

As indicated in Table 68, the ten projects with the most favorable responses to questions at the junior high school level had an average expenditure for those activities that fluctuated with respect to the average overall project expenditures for these activities. During the first year, junior high activities cost these 10 projects a smaller percent of their total Part D expenditures than was experienced overall. During the second year, these 10 projects increased the proportion of these expenditures more than the overall average, to the point that their average percentage of costs was higher. In the third year, however, their average percent of expenditures was virtually the same as the average for all projects.

TABLE 68

Comparison of Average Percent of Total Expenditures for Junior High School Activities Per Project to the Average for the 10 Most Favorable Projects

Reporting Category	Average % of Total Expenditures		
	Year I	Year II	Year III
10 Most Favorable Projects	21.4	38.3	27.3
Overall Average Per Project	29.3	31.0	27.6

These cost data become significant when compared to the average number of junior high participants per project. The 10 most favorably responding projects, as pointed out in Chapter IX, averaged at least 50% fewer participants per project per year than was reported for all projects.

3. Senior High School Activities

Findings with respect to the senior high school activity categories are presented below.

a) Work Experience Activities

In Chapter IX it was reported that the number of participants in work experience activities increased for both those projects with the most favorable responses to student outcome questions and for all projects for all three project years. As indicated in Table 69, the seven most favorable projects with respect to student outcomes tended to spend a smaller portion of their Part D monies for work experience activities than was reported for all projects. This relationship continued throughout the three-year project period with both the most favorable group of projects and all projects taken together gradually increasing the percentage of expenditures and the number of participants each year.

TABLE 69

Comparison of Average Percent of Total Expenditures for 12th Grade Work Experience Activities Per Project to the Average for the 7 Most Favorable Projects

Reporting Category	Average % of Total Expenditures		
	Year I	Year II	Year III
Seven Most Favorable Projects	12.1	13.0	14.9
Overall Average Per Project	16.9	17.5	19.5

b) Skill Training Activities

In the preceeding chapter it was pointed out that there were a total of six projects in which skill training activities resulted in the production of favorable student outcomes. Those projects, it was noted, differed from the average of all projects in that they reported a higher number of participants per project; i.e., the projects with favorable outcomes increased skill training participants by 30% over the three years as compared to an overall increase of only 5% for the three-year period.

As Table 70 shows, in terms of cost, the three year trend with regard to expenditures for skill training activities was a progressive proportionate decrease for all projects. The expenditure data suggest similar experiences for both groups in terms of trends and actual expenditure levels. The major difference between the two groups is that the most favorable projects involved twice as many participants in skill training activities for approximately the same relative cost as was the case for all projects.

TABLE 70

Comparison of Average Percent of Total Expenditures for 12th Grade Skill Training Activities Per Project to the Average for the Six Most Favorable Projects

Reporting Category	Average % of Total Expenditures		
	Year I	Year II	Year III
Six Most Favorable Projects	20	15.6	14.9
Overall Average Per Project	21.0	17.6	13.6

c) High School Familiarization Activities through Participating Teachers

Five projects were found to have been most effective in producing student outcomes as a result of the high school familiarization activities of participating teachers. These projects reflected an overall three-year increase in the average number of participants per project of 153%, while the general experience of Part D projects was to show no increase in the number of participants during the three years.

Table 71 shows that the three-year expenditure pattern for these activities was found to be the reverse of the participation trend reported earlier. It was found that on the average, all projects increased their percentage of expenditures for these activities during the three-year term of Part D support. The five with the most favorable responses to student outcome questions, however, decreased their average percentage of expenditure for each of the three years. Indeed, in the third year these five projects reduced their average percent of costs below the overall average.

The overall experience at the high school level differs from that at the elementary and junior high school levels with respect to familiarization activities. However, the projects found to be most effective in producing student outcomes were found to report three-year cost and participant trends which parallel the experience at the elementary and junior high levels.

TABLE 71

Comparison of Average Percent of Total Expenditures for 12th Grade Familiarization Activities Per Project to the Average for the Five Most Favorable Projects

Reporting Category	Average % of Total Expenditures		
	Year I	Year II	Year III
Five Most Favorable Projects	22.1	20.9	18.3
Overall Average Per Project	16.6	15.3	20.5

D. Summary and Conclusions

Projects which were most effective in producing student outcomes as a result of the activities of participating elementary and secondary teachers and counselors, i.e., familiarization, were found to differ from all projects at all levels (elementary, junior high, and senior high). At the elementary level the projects with the greatest number of favorable responses involved fewer participants per project than did all projects. These projects also devoted a larger proportion of their Part D funds to elementary activities than did all projects.

At the junior high level, the projects most effective in producing student outcomes increased their proportionate expenditures during the three-year Part D support. On the other hand, the trend for all projects reflected an overall decrease in the expenditure percentage for these activities. The projects with the most favorable responses most noticeably differed from all projects in the number of participants per project. For each of the three years these 10 projects involved 50% or fewer participants than did all projects.

At the senior high school level, those projects found to be most effective in producing student outcomes through the familiarization activities of participating teachers showed a pattern of decreased cost percentage during the three-year term of Part D support. This was coupled with an overall increase in the number of participants for these activities. This compares with an overall increase in the expenditure percentage level for all projects, coupled with no gain in the number of participants per project.

The differences between the projects found to be most effective in producing student outcomes as a result of skill training activities and of work experience activities and all projects with those activities was not as pronounced as were the differences cited for familiarization activities. The projects with the greatest number of favorable responses in the work experience activity area reflected both a slightly lower percentage of expenditures and fewer participants than did all projects with work experience activities.

The proportion of expenditures and the three-year trend of those proportions did not vary significantly between the most favorable projects in skill training activities and all projects with those activities. The most favorable projects, did, however, involve considerably more students per project than did the average for all projects.

Given the initially higher percentage of costs and the lower level of participant involvement in the projects with the most favorable responses as compared to all projects, it must be concluded that the most favorable projects invested proportionately more time and resources in start-up activities than did other projects. It appears, therefore, that a major factor in the success or lack of success of a project in producing student

outcomes as a result of familiarization activities is the proportion of investment and activity prior to full-scale project implementation.

In general, work experience activities and job entry skill training activities were less effective in producing student outcomes than familiarization activities. It is possible, however, that the overall shift of resources toward high school familiarization activities noted in the third project year contributed to a lower level of student outcome results for the work experience and skill training student group.

CHAPTER XI: STATE ADMINISTERED PART D(d) FUNDS

A. Background and Purpose

Part D of the Vocational Education Act, as amended in 1968, was designed to stimulate the development of new approaches to linking school and the world of work, thereby assisting young people to identify and prepare for careers most suited to their personal aspirations and talents. Congress directed that funds appropriated in this section of the Act be expended to reduce youth unemployment through exemplary efforts which accomplish one or more of the following:

- familiarize elementary and secondary school students with the broad range of occupations for which special skills are required and the requisites for careers in such occupations;
- provide students with educational experiences through work during the school year or in the summer;
- provide intensive occupational guidance and counseling during the last years of school and for initial jobs placement;
- broaden or improve vocational education curriculua;
- exchange personnel between schools and other agencies, institutions, or organizations participating in activities to achieve the purposes of the Act, including manpower agencies and industry;
- increase educational attainment of young workers released from their jobs;
- motivate and provide pre-professional preparation for potential teachers for vocational education; and
- provide other activities which are consistent with the purpose of the Act.

Congress stipulated that half of the appropriated funds were to be expended by the Department of Health, Education and Welfare in each state and territory and that the other half were to be allocated to the states and territories directly. The portion of the Part D appropriation dispersed by the states and territories was not constrained by the guidelines applicable to the projects funded directly by USOE.* The states were obliged simply to utilize the funds in accordance with the purposes and provisions of the legislation and the administrative and reporting provisions specified in the Federal Register.** As a result, both the nature and duration of the state administered projects, Part D Sec 142(d), in many states varied markedly from the projects funded under the federally controlled portion of the Act. They also varied considerably from state to state.

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* Policy Paper AVL, V 70-1; Oct. 2, 1969.

** Volume 35, No. 91 - Saturday, May 9, 1970, p. 7348.

While the major emphasis of this evaluation effort was on the federally supported projects, there was an interest in determining how the state-administered portion of the Part D funds was utilized. More specifically, USOE was interested in determining the objectives of the state funded projects, and the strategies used to achieve these objectives. Given the level of detail desired and the fact that over 1,000 grants had been awarded by the states during the first three years of the Part D effort, it was determined by USOE that the source of information on state administered projects would be state level personnel only. The purpose of this chapter is to present and discuss the information collected on the state funded projects. In addition, a summary of relevant activities of the Research Coordinating Units in the states visited is presented.

B. Study Methodology

To secure the information necessary to answer the questions posed by the study regarding the state administered Part D funds, the first step was to review the information already gathered by USOE. One requirement imposed on the states by the Office of Education was that a copy of each state-approved proposal be submitted to the Division of Vocational and Technical Education of USOE (DVTE) within 15 days of the award of a grant or contract. Based on the information so provided, DVTE published a booklet, "State Administered Exemplary Projects in Vocational Education," in the Spring of 1973. This publication contained, for each state, a list of the project titles along with the name of the organization receiving the grant and the amount and duration of the grant. Review and analysis of the information in this publication was carried out during August and September 1973.

The review of the information available within USOE made it clear that additional data from state departments of education were necessary to respond to the study questions. Specifically, the following was necessary:

- verification of the information contained in the USOE publication;
- identification of the objectives of each project;
- an indication of the criteria used in awarding Part D grants;
- an indication of the overall funding strategy;
- an indication of the relationship between the state departments of education and the recipients of the Part D grants; and
- an indication of which projects and activities were judged to be worthy of replication.

It was assumed from the start that collection of data pertaining to state projects would be collected in the course of gathering data pertaining to the federally administered Part D projects. Consequently, it was concluded that data would be obtained from the forty-nine states, plus the District of Columbia, where first round Part D projects were to be studied; since a study team would not visit Hawaii, data supplementing that already in USOE files would not be obtained in that state. In addition, it was concluded that the information would be obtained by the member of the study team who was scheduled to interview state personnel in the course of obtaining data on the federally supported projects and that the primary mode of data collection would be an interview with the individual(s) responsible for the state administered Part D effort. For the most part, the individual within the state department most conversant with the federally supported projects was also the individual responsible for the state funding process. The interviews were conducted in the Spring of 1974.

To facilitate the interview process a single interview schedule was prepared to obtain data on both the federal and state projects. In addition to the interview schedule, two forms for each state were prepared. These forms were sent to the state departments for completion prior to the arrival of the study team interviewer. On the first form the state department official(s) most familiar with the state-funded projects were asked to identify the objectives of each grant. In essence, the form was a matrix with each of the state-funded projects listed as the rows and eight objectives, taken from the federal register, forming the columns. The state representative was asked to indicate which objectives applied to each project and to up-date and verify the list of projects on the form. On the second form the state representative was asked to indicate the amount of the grant awarded by fiscal year, and the number of participants served by the project.

In approximately 50% of the cases these two forms were completed at least in part by the time the interview took place. In these cases the interview ind uded a review of the information contained on the forms to verify that the instructions were clear and the information was recorded consistently. In some other cases the forms were completed by the interviewee or an assistant during the course of the interview. In the remaining cases the interviewee indicated that more time was necessary to complete the forms and that they would be returned to the study team at a later date. In one state the information was not received despite several follow-up requests.

In general, the representatives of the state departments were both knowledgeable and cooperative. For the most part they were quite familiar with the Part D effort and willing to assist the study. In some cases, however, there had been substantial staff turnover within the state department since the time the Part D effort began and the interviewees were understandably hesitant in responding to questions regarding events and criteria which preceded their involvement in the effort. A second qualification which must be placed on the data obtained from the interviewees is that in most cases the state-supported grants were awarded by a committee and the criteria were not formally recorded. As a result, the statements reflecting the funding criteria used reflect the judgment of only one of the several individuals involved in the project selection process.

C. Findings

1. Allocation and Obligation of Funds

The available data concerning each state's total allocation and obligation of funds for FY 70, FY 71, and FY 72 are shown in Table 72, together with three-year totals, the percentage of each year's allocation that was obligated, and the percentage of the total allocation that was obligated. As shown in Table 73, one-year allocations ranged from a low of $102,000 (Alaska, FY 70) to a high of $348,000 (California, FY 72), with median allocations of $117,000 in FY 70 and $139,000 in FY 71 and FY 72. Obligations ranged from a low of $44,000 (Nevada, FY 70) to a high of $421,000 (Florida, FY 72), with medians of $115,000, $144,000, and $255,000 in FY 70, FY 71, and FY 72 respectively. Both the minimum and maximum obligations were lowest in FY 70, as were the minimum and maximum allocations. The lowest reported percentage of allocated funds that were obligated in one year was 35% (Illinois, FY 70), while the highest reported percentage was 238% (Florida, FY 72). On a three-year total basis, the median percentage obligated was 95.6%. There was no apparent relation between the amount allocated and the percentage obligated; for example, the state with the lowest three-year allocation, Alaska, obligated 100% of its funds and the state with the highest three-year allocation, California, obligated 99.5% of its funds.

TABLE 72
STATE ALLOCATIONS AND OBLIGATIONS OF FUNDS, BY STATE AND FISCAL YEAR

	ALLOCATIONS				OBLIGATIONS				PERCENTAGE OBLIGATION			
TOTALS	FY-70	FY-71	FY-72	THREE YEAR TOTAL	FY-70	FY-71	FY-72	THREE YEAR TOTAL	FY-70	FY-71	FY-72	THREE YEAR TOTAL
1 Alabama	123,217	151,217	150,207	424,641	123,138	151,241	150,207	424,586	99.9	100.0	100.0	99.9
2 Alaska	101,868	104,123	104,473	310,464	101,868	104,123	104,473	310,464	100.0	100.0	100.0	100.0
3 Arizona	110,408	122,971	123,373	356,753	99,150	102,914	136,353	379,421	81.6	83.6	151.0	106.3
4 Arkansas	112,776	127,098	126,547	366,421	112,276	121,303	134,472	370,051	100.0	97.0	100.0	101.1
5 California	211,411	345,941	347,861	905,213	183,324	312,893	304,932	801,129	87.8	101.0	105.0	99.5
6 Colorado	112,913	128,570	129,000	370,513	85,248	99,958	157,467	342,673	75.4	77.7	122.0	92.4
7 Connecticut	116,412	136,223	136,367	388,002	96,259	183,239	103,827	378,325	74.0	138.1	76.1	99.5
8 Delaware	103,136	106,921	106,929	316,942	102,136	104,921	106,925	318,982	100.0	100.0	100.0	100.0
9 District of Columbia	103,936	108,689	108,512	321,137	103,936	104,689	108,912	321,137	100.0	100.0	100.0	100.0
10 Florida	134,225	175,550	177,187	486,962	166,660	171,924	421,198	762,782	124.1	99.6	237.7	156.6
11 Georgia	129,321	161,046	161,779	452,146	129,421	161,935	99,135	390,491	100.0	100.0	60.2	85.7
12 Hawaii	113,137	111,710	111,328	327,875	92,000	104,437	120,635	317,072	86.6	93.3	107.1	96.6
13 Idaho	106,801	110,603	110,677	328,081	101,804	113,603	99,035	315,342	100.0	100.0	90.3	96.7
14 Illinois	192,979	239,023	238,937	670,939	57,306	183,886	370,269	554,461	35.1	79.4	154.9	86.5
15 Indiana	131,089	163,828	168,530	468,247	114,599	161,628	168,530	452,747	88.2	100.0	100.0	96.6
16 Iowa	117,479	138,595	138,954	395,018	117,351	179,673	137,435	434,459	99.8	129.6	98.9	109.4
17 Kansas	114,144	131,221	131,740	377,105	114,143	133,509	131,731	385,377	100.0	100.0	100.0	102.1
18 Kentucky	120,748	145,801	145,014	411,564	120,718	145,820	145,014	411,582	100.0	100.0	100.0	100.0
19 Louisiana	121,485	153,024	153,959	432,968	121,481	153,755	153,959	431,198	100.0	99.4	100.0	99.7
20 Maine	102,399	113,234	117,935	332,211	106,005	113,254	88,689	307,948	100.0	100.0	78.5	92.6
21 Maryland	122,343	149,030	149,775	421,888	122,091	121,700	149,750	393,541	99.7	82.3	100.0	93.9
22 Massachusetts	130,355	167,008	166,206	463,729	128,229	153,155	123,688	405,072	98.4	91.7	74.3	87.9
23 Michigan	151,773	220,509	221,024	593,306	154,773	171,121	141,588	467,482	100.0	77.5	63.9	78.2
24 Minnesota	123,284	151,397	221,624	496,305	122,537	161,714	132,836	421,087	99.1	109.5	59.9	84.8
25 Mississippi	116,279	135,943	135,347	387,569	112,072	98,713	94,116	305,901	96.3	73.3	69.5	78.7
26 Missouri	175,619	138,761	169,153	444,533	126,619	154,761	159,153	444,533	100.0	100.0	100.0	100.0
27 Montana	101,670	110,309	110,100	329,079	101,670	110,309	110,100	329,079	100.0	100.0	100.0	100.0
28 Nebraska	103,840	119,731	115,022	338,296	103,910	107,907	78,841	290,658	95.1	85.9	67.9	82.0
29 Nevada	102,335	105,154	105,338	312,827	43,730	103,660	94,253	241,643	42.7	101.2	89.5	78.6
30 New Hampshire	101,007	108,826	104,801	321,450	98,958	98,013	98,561	291,532	98.1	86.3	90.5	90.6
31 New Jersey	132,228	174,305	187,246	513,109	132,228	144,995	144,967	470,790	100.0	100.0	77.4	91.7
32 New Mexico	107,005	113,264	118,582	338,851	107,005	11 ,464	112,113	334,612	100.0	100.0	97.0	99.0
33 New York	194,298	317,519	319,332	831,459	233,597	36 ,661	321,470	919,728	117.7	114.5	101.9	110.4
34 North Carolina	133,401	173,930	173,003	480,324	98,014	157,036	133,378	418,428	93.9	90.3	77.1	87.0
35 North Dakota	101,270	106,326	106,378	323,074	101,270	104,539	94,826	302,635	100.0	93.5	85.8	93.6
36 Ohio	165,180	233,844	243,409	651,173	159,776	231,787	162,612	550,993	96.1	95.0	69.6	87.0
37 Oklahoma	113,211	143,478	131,472	387,261	45,169	131,744	167,656	344,379	39.2	100.8	125.6	88.5
38 Oregon	112,176	127,116	127,515	367,801	85,172	91,253	108,246	284,971	76.9	94.6	85.0	78.5
39 Pennsylvania	183,049	234,216	243,459	660,724	168,049	224,600	244,457	637,106	100.0	90.9	100.0	96.4
40 Rhode Island	105,137	111,330	111,254	327,731	105,137	111,342	111,254	327,733	100.0	99.9	100.0	99.9
41 South Carolina	138,430	141,226	140,274	409,900	79,981	91,230	86,850	257,161	68.6	64.5	61.6	64.9
42 South Dakota	104,470	109,987	109,811	324,268	104,997	107,135	108,929	320,071	100.0	97.5	99.2	98.7
43 Tennessee	123,351	153,754	152,949	431,054	121,351	153,754	152,949	431,054	100.0	100.0	100.0	100.0
44 Texas	169,450	233,300	256,827	659,586	160,391	180,743	413,855	754,989	94.6	71.3	161.1	111.0
45 Utah	107,005	115,161	115,582	337,851	11 ,311	10 ,511	113,002	340,637	103.9	91.0	100.0	100.7
46 Vermont	102,602	103,741	103,627	313,973	101,603	101,130	107,130	313,163	99.3	98.5	101.4	99.7
47 Virginia	129,734	162,963	163,769	455,196	116,734	130,760	169,965	417,479	90.7	80.2	103.8	91.6
48 Washington	120,482	135,651	136,074	392,340	125,663	139,170	131,738	401,500	101.9	91.4	97.1	97.1
49 West Virginia	137,209	171,031	173,661	501,811	112,709	124,841	163,681	361,341	100.0	100.0	100.0	100.0
50 Wisconsin	129,492	137,736	137,990	431,448	93,579	129,294	155,589	380,462	72.8	62.0	98.7	80.1
51 Wyoming	102,202	101,320	101,761	311,823	102,155	104,860	101,761	311,776	99.9	100.0	100.0	99.9

TABLE 73

RANGE AND MEDIAN OF STATE ALLOCATIONS AND OBLIGATIONS*

	FY-70	FY-71	FY-72	3-Year Total
		ALLOCATION		
Low	$102,000	$104,000	$104,000	$310,000
High	211,000	346,000	348,000	905,000
Median	117,000	139,000	139,000	382,000
		OBLIGATION		
Low	$ 44,000	$ 91,000	$ 79,000	$246,000
High	234,000	364,000	421,000	919,000
Median	115,000	144,000	255,000	412,000
		PERCENTAGE OBLIGATED		
Low	35.1	64.5	59.9	64.9
High	124.1	138.1	237.7	156.6
Median	93.0	95.1	98.7	95.6

* All dollar figures are to the nearest $1,000

Approximately one-fourth of the states (14) obligated less than 90% of their three-year allocation, and eight states obligated over 100% of their allocation by contributing funds from other sources, at least temporarily.

With respect to those states reporting obligations of over 100% of the amount allocated for a year, several explanations are possible. First it should be noted that the federal legislation permits expenditure of funds allocated for one fiscal year in the next fiscal year. In the case of Colorado, for example, this appears to be the case. Colorado reports obligating 75.4% of its allocation in FY 70, 77.7% in FY 71, and 122.0% in FY 72. It appears in this case that what was unobligated in FY 70 was applied to the total amount available for FY 71, and the unobligated balance of the available funds for FY 71, and the unobligated balance of the available funds for FY 71 (new federal funds plus unobligated balance from FY 71) was applied to FY 72. Assuming this approach, it is quite possible for Colorado to obligate 122% of the FY 72 federal allocation (new money) and still show after three years a total obligation of 92.4% of the total federal allocation. Carrying over funds may also partially explain why half the states obligated 95.6% or less of their three-year allocation. *

A second possible explanation is illustrated by Minnesota. In Minnesota, 99.4% of the allocation was reported as obligated in FY-70, 109.5% in FY-71, and 59.9% in FY-72. In spite of the obligation in FY-71 of 109.5% of the allocated funds when virtually no funds from FY-70 remained unobligated, the three year total obligation was less than the total federal allocation. In this case, it appears that funds from some other source were used to supplement the available Part D allocation with the expectation that in the long run Part D would cover the obligation. This may be the explanation for the states where the three year total obligation exceeds the three year total allocation.

A third explanation is simply that the reported figures are incorrect. In Florida, the figures provided by the state bear such little relation to the federal allocation that this is the most logical explanation. This judgment is strengthened by the knowledge that in Florida the state allocation was used to supplement the federally administered Part D project (Sec. 142(c)) and that the state office did not report on Sec. 142(c) expenditures independently.

* Fifteen of the SEA interviewees indicated that Part D(d) funds were used to pay for staff time devoted to administering the program, but no relation was found between this practice and the percentage of allocated funds that was obligated.

2. Number of Grants Awarded

The total number of grants awarded in FY 70, 71 and 72, as well as the total over the three years combined, is shown in Table 74. The total number of grants awarded in FY 70, 71, and 72 combined was 1,157, with a mean of 22.7 grants per state. As can be seen from the median and the maximum number of grants awarded, only a few states awarded a relatively large number of grants; as shown in the state-by-state data in Table 75, Texas awarded 37 in FY 70, Wisconsin 27, and the next most frequent was only 14. Similar distributions are found in the other years. In terms of the three-year totals, the three highest states awarded 85, 66, and 50 grants, although the median figure is only 18. Three of the states funded only one project in each of the three years (the District of Columbia, Georgia, and South Carolina).

TABLE 74

TOTAL NUMBER OF GRANTS AWARDED, BY FISCAL YEAR

	FY-70	FY-71	FY-72	Total
Number of Grants	336	411	410	1,157
Median	7	6	7	18
Lowest No. of Grants	1	1	1	3
Highest No. of Grants	37 (Texas)	31 (Texas)	35 (New Mexico)	85 (Texas)

3. Number of Grantees Funded

The number of different grantees that each state funded is shown in Table 75, and summary data are shown in Table 76, below.

TABLE 76

TOTAL NUMBER OF GRANTEES FUNDED, BY FISCAL YEAR

	FY-70	FY-71	FY-72	Total*
Number of Grantees	288	388	364	642
Median	5	6	6	10
Lowest No. of Grantees	1	1	1	1
Highest No. of Grantees	24 (Texas)	25 (Texas)	27 (New Mexico)	38 (Texas)

* The total refers to the number of different grantees and is thus not equal to the sum of the entries in each fiscal year.

TABLE 75

NUMBER OF GRANTEES, NUMBER OF GRANTS, AND RANGE OF GRANT AMOUNT BY STATE AND FISCAL YEAR

	NUMBER OF GRANTEE				NUMBER OF GRANTS				GRANTS ($)							
	1970	1971	1972	TOTAL*	1970	1971	1972	TOTAL	1970		1971		1972		TOTAL	
1																
2	3	6	6	7	3	6	6	15	10,000	1,567	10,000	2,500	11,000	2,500		
3	5	4	2	9	19	2	2	17	32,458	20,267	43,458	3,420			43,458	
4	4	4	8	9	4	4	2	10	44,150	14,231	44,231	10,000				
5	1	8	10	11	1	8	10	19	38,948	1,500	20,000	1,500				
6	10	12	12	22	14	21	15	50	43,000	1,000	43,000	1,000				
7	6	10	9	15	6	11	11	28	25,000	2,000	25,000	2,000				
8	3	5	4	7	3	5	4	12	45,263	7,108	47,302	15,137			47,302	15,137
9	3	4	5	7	4	6	7	17	41,000	2,174	31,726	1,000				
10	1	1	1	1	1	1	1	3	103,936	103,936	108,684	108,684	108,684	108,684	108,684	108,684
11		2	3	5	2	2	3	7	141,888	23,000	141,888	12,000				
12	1	1	1	1	1	1	1	3	129,241	129,241	141,241	141,241				
13	6	7	7	7	6	7	7	21	52,307	3,387	38,243					
14	5	6	3	8	5	6	4	15	33,243	10,084	15,343	1,084				
15	2	2	15	20	2	2	15	20	43,500	13,720	40,000					
16	4	4	5	9	4	4	5	13	67,331	2,758	62,630	10,000			67,331	
17	2	4	4	4	2	4	4	10	58,860	58,441	50,129	23,000				
18	5	15	7	7	5	5	7	17	32,783	14,138	46,500	11,000				
19	2	3	4	4	2	3	4	9	60,374	60,374	60,502					
20	1	4	4	5	1	4	5	10	124,484	124,484	130,000	5,000				
21	4	12	10	23	4	13	10	27	38,000	5,158	24,818					
22	8	8	7	14	8	10	7	25	31,000	5,000	28,000	5,000				
23	5	5	5	8	5	5	5	15								
24	7	6	6	7	7	6	6	19	30,361	23,100	52,088	23,100				
25	1	19	7	23	1	20	7	28	52,529	1,500	52,529	9,000				
26	1	1	2	2	1	1	2	4	122,537	122,551	25,088	1,000				
27	3	3	3	3	3	3	3	9	116,278	116,278	143,914	139,234				
28	3	12	2	14	3	14	6	23	76,203	32,000	101,397	10,231				
29	4	4	4	5	4	4	4	12	21,381	21,079	28,696					
30	3	6	4	6	3	7	5	12	45,314	15,788	47,147					
31	6	6	9	14	10	6	9	25	27,074	5,192	25,964					
32	5	5	5	10	5	5	5	15	51,742	540	20,000					
33	10	4	27	33	11	3	38	42	44,827	15,131	47,077					
34	4	5	4	7	4	6	7	17	15,924	1,050	42,200	10,000				
35	13	13	10	23	14	13	30	57	125,509	12,402	82,340					
36	7	7	9	10	7	7	10	24	27,235	152	54,972					
37	5	10	5	11	5	10	5	20	28,854	1,230	31,503					
38	5	16	13	21	5	12	15	32	57,023	1,741	38,253					
39	10	12	12	21	10	10	12	32	14,284	1,005	22,300	713				
40	5	8	9	12	12	8	9	9	12,592	280	17,000					
41	7	8	9	18	7	10	13	30	44,500	4,138	62,139	18,377				
42	1	1	1	1	1	1	1	3	53,251	1,494	11,067					
43	5	3	3	5	5	3	3	11	22,081	22,081	21,210					
44	1	2	2	2	1	2	2	5	45,000	8,390	50,135					
45	27	25	15	38	32	31	17	80	123,224	124,351	133,041					
46	6	7	4	19	13	11	4	28	50,000	250	25,000					
47	9	10	6	16	14	19	7	42		37	30,214					
48	5	8	7	13	5	8	9	22	27,644	100	20,165	141	22,765	120		
49	10	19	12	35	10	19	13	42	80,000	2,354	72,422	1,200	72,422	1,200		
50	7	10	7	16	9	10	7	26	22,700	3,500	25,000	1,000	30,000	1,200		
51	17	15	17	23	27	15	23	65	35,816	1,000	26,196	3,500	25,317	5,000		
52	3	6	12	19	3	6	14	22	1,620	932	20,000	1,317	30,444			
									50,000	6,075	64,767	1,497	18,000	2,000		

*Unduplicated total. The total column reflects the number of different grantees in the three year period.

The mean number of different grantees funded over the three-year period was 12.6, with means of 5.6, 7.6 and 7.1 in FY 70, 71, and 72 respectively. As was the case with regard to the number of grants, a few states distributed their funds among a large number of grantees, while three utilized only one grantee (the SEA) over the entire three-year period. (The upper end of the range would be expanded if each of the projects funded in the "mini-grant" programs in Colorado and New Mexico had been counted separately).*

4. Size of Grants Awarded

The largest and smallest grant awarded by each state in each of three fiscal years is shown in Table 75, with summary data shown in Table 77, below. Again, there is a very wide range between the state with the largest maximum

TABLE 77

LARGEST AND SMALLEST GRANTS AWARDED, BY FISCAL YEAR

	FY-70	FY-71	FY-72
Largest Maximum Grant	$131,888 (Florida)	164,946 (Georgia)	169,176 (Florida)
Smallest Maximum Grant	12,590 (Oregon)	14,518 (Maine)	16,000 (North Dakota)
Largest Minimum Grant	129,246 (Georgia)	135,934 (Miss.)	169,176 (Florida)
Smallest Minimum Grant	37 (Utah)	141 (Vermont)	120 (Vermont)

grant and the state with the smallest maximum grant. Similar findings were obtained for the minimum grants. In the case of the maximum grants, the largest exceeds the smallest by more than a factor of 10 in each fiscal year. The extremely small grants shown in Table 77, and Table 75, i.e., those of under $1,000, generally represent outlays for a specific unit of skill training or evaluation of a small component of a project.

5. Type of Grantees Funded

The 642 different grantees funded during the period FY 70 through FY 72 were classified into the five categories shown in Table 78. The totals shown in the table indicate clearly that SEA's have selected local school districts as the primary agent to design and implement projects supported by the state controlled portion of Part D funds. In the aggregate, 59% of the grantees were found to be local school districts and an additional 12% of the grantees were individual public schools or resource centers. This category, together with the category of vocational or technical schools, accounts for over 50% of the grantees funded in 44 of the 51 jurisdictions.

* In these states a large number of small grants were made to individual teachers, counselors, etc., to enable them to plan or implement innovations in their school or classroom. For most purposes, the states report these as a single block grant to one grantee who administers the "mini-grant" effort.

TABLE 78
TYPES OF GRANTEES

	Public Sch. Dist. / Ind. Sch./ Res.Ctr.	Voc. or Tech. School	Community College/University	State Dept. of Education	Private Organization	TOTAL
1. Alabama	6			1		7
2. Alaska	6		2		1	9
3. Arizona	7		1	1		9
4. Arkansas	4	3	2	2		11
5. California	18		7			25
6. Colorado	9		5	1		15
7. Connecticut	5	1	1			7
8. Delaware	5	1	1			7
9. District of Columbia	1					1
10. Florida	2		2	1		5
11. Georgia				1		1
12. Hawaii	1		6			7
13. Idaho	7		1			8
14. Illinois	16		4			20
15. Indiana	8		1			9
16. Iowa	2		2			4
17. Kansas	3	3	1			7
18. Kentucky	4					4
19. Louisiana	5					5
20. Maine	17	2	2	1	1	23
21. Maryland	10		4			14
22. Massachusetts	5	2	1			8
23. Michigan	6		1			7
24. Minnesota	18	4	1			23
25. Mississippi	1			1		2
26. Missouri	2		1			3
27. Montana	12	1	1			14
28. Nebraska	3		2			5
29. Nevada	5		1			6
30. New Hampshire	10	1		1	1	13
31. New Jersey	11	4		1		16
32. New Mexico	26	2	4		1	33
33. New York	6		1			7
34. North Carolina	6	9	8			23
35. North Dakota	7		3			10
36. Ohio	13					13
37. Oklahoma	9	6	4	2		21
38. Oregon	17		4			21
39. Pennsylvania	6	3	2		1	12
40. Rhode Island	14	1	2		1	18
41. South Carolina				1		1
42. South Dakota	4		1			5
43. Tennessee	1			1		2
44. Texas	36		2			38
45. Utah	13	2	2	2		19
46. Vermont	11	3	1	1		16
47. Virginia	7		6			13
48. Washington	26		9			35
49. West Virginia	15	1				16
50. Wisconsin	11	13		1		25
51. Wyoming	17		2			19
TOTALS	454 (71%)	62 (10%)	101 (16%)	19 (3%)	6 (1%)	642

While the vast majority of grantees were schools, colleges, or public educational agencies, it is of interest to note that only six states included grants to what might be considered atypical grantees. The private organizations funded included an independent education agency (Maine), a social agency for the physically handicapped (Alaska), a Health Careers Council (New Hampshire), private employers and the school district (New Mexico), an Opportunities Industrialization Center (Rhode Island), and the Personnel and Guidance Association (Pennsylvania). The selection of these institutions is quite consistent with Part D, Section 142 (d) of the Act which provides that the state board may make grants "to local education agencies or other public or non-profit private agencies, organizations, or institutions including business and industrial concerns... as it determines will most effectively carry out the development, establishment and operation of exemplary and innovative occupational education programs or projects designed to serve as models for use in vocational education programs."

In 17 states, grantees included State Departments of Education. In two of these states (Arkansas and Oklahoma) separate state vocational education agencies also served as grantees, thus raising the total number of entries in this category to 19. In three cases (Georgia, Mississippi, and South Carolina), the State Department of Education was the only grantee of the state. In many cases, the projects administered by the state agency grantees encompassed several school districts. In addition, there were several cases in which projects which were administered by a Community College or University were operated with one or more school districts. In such cases, the close collaboration between the grantee and LEA may be presumed. In one instance (Oregon) a community college and a high school served jointly as the Part D grantee.

b. Duration of Projects

Of the 331 projects funded in FY 70, 47% (154 projects) were funded for one year only; 22% (73 projects) were funded for a second year, and the remaining 31% (104) projects) were funded in all three fiscal years, FY 70, 71 and 72. These data are shown in Table 79, which also shows the number of states following each of the possible project duration patterns. As the table indicates, in 14 states all of the FY 70 projects were also funded in FY 71 and FY 72. At least one project was funded for all three years in 38 states (75%), and at least one project was funded for only one year in 33 states (65%). Only four states funded one-year projects exclusively, and only one funded two-year projects exclusively. Eighteen states continued all of their FY 70 projects for at least one more year. There are just about as many states whose FY 70 projects were of one-year, two-year, and three-year duration (13) as there are states having all FY 70 projects continue for at least two more years (14). These two patterns together encompass 53% of the states.

TABLE 79

PATTERNS OF PROJECT DURATION FOR GRANTS AWARDED IN FY 70

Pattern	No. of States	Number of Projects			
		1 yr.	2 yr.	3 yr.	Total
All Projects of 1-year duration	4	27	-	-	27
All Projects of 2-year duration	1	-	5	-	5
All Projects of 3-year duration	14	-	-	29	29
Mixed: 1-year and 2-year	8	47	27	-	74
Mixed: 1-year and 3-year	8	28	-	24	52
Mixed: 2-year and 3 year	3	-	6	9	15
Mixed: 1-year, 2-year, and 3-year	13	52	35	42	129
Total	51	154	73	104	331
%	-	47%	22%	31%	100%

7. Criteria Used in Fuding Projects

In order to obtain information on the strategies that may have been used in funding Part D(d) projects, a series of questions was asked pertaining to various criteria that may have been applied in making funding decisions. These criteria were: a) type of activity proposed; b) the annual amount of money proposed; c) the duration of the proposed project; d) the type of grantee; and e) the type of expenditures. In addition, the interviewee was asked whether the policy with regard to each criterion element had changed since the start of the program. A summary of the responses elicited is presented on the following page (Table 80).

All but eleven of the states indicated that they used one or more fairly specific programmatic criteria in their funding decisions; fifteen states cited more than one programmatic criterion. As shown in Table 80, the most frequently mentioned criterion was related to the project's goals in the areas of career awareness, career exploration, or career preparation (15 states), while the remaining criteria were stated in terms of process, such as teacher training, or curriculum development, or in terms of the specific target group, such as disadvantaged students. Eight of the states said they were specifically looking for innovative approaches in connection with whatever process factor they used as a criterion. Half of the states had changed their programmatic criterion at some time in the preceding four-year period, almost always in the direction of increased specificity.

Only nine of the states utilized the funding level of the project as a criterion, and only five of these had changed this criterion during the period. Five other states had changed from using a funding level criterion to not using such a criterion.

Ten states preferred or required that projects be of one-year duration, and 13 states preferred or required longer projects. Twenty-six states had no preference or requirement with regard to project duration. Only six of the states that used duration as a criterion had adopted this policy some time during the four-year period rather than at the beginning of the program.

TABLE 80
FUNDING CRITERIA

Activity Used as Criterion	Number of States	Number of States that Changed Criterion Policy
Career awareness, exploration or preparation	15	7
Guidance	7	4
Placement	4	4
Teacher Training	6	3
Curriculum or materials development	6	2
Special Student group (e.g., disadvantaged)	5	3
Innovative approaches	8	5
Other	5	4
Unspecified or None	11	2
Funding Level Used as Criterion		
$15,000 or smaller maximum	2	2
Approximately $50,000 maximum	1	1
Approximately $100,000 maximum	1	0
Specified minimum	1	0
Other	4	2
No specific criterion	40	5
Duration Used as Criterion		
Three year projects preferred	8	1
Three year maximum	3	0
One year maximum or preferred	10	5
Two-three years preferred	2	0
No specific criterion; projects funded one year at a time	5	0
No specific criterion; funded policy unstated	21	1
Grantee Type Used as Criterion		
LEA only or perferred	9	2
Public institutions only or preferred	9	1
Non-profit institutions eligible	5	3
Other	3	3
No specific criterion	23	1
Type of Expenditure Rejected or Severely Limited		
Capital expenditure, including equipment	28	3
Salaries	6	3
Other	1	1
No specific criterion	18	0
Other Criteria		
Did not use other criteria	25	
Used other criteria:	24	
Guidelines, plans, etc.	6	
Local funding	4	
Dissemination, etc.	7	
Geographic spread	1	
Innovative	2	
Independent evaluation	1	
Newly participating LEAs	1	
K-12	1	
Competitive	1	
Plans for continuation	1	
Voc. Ed. Centers	1	

Almost half of the states did not restrict the types of grantee that might be funded; eighteen of the remaining states divided equally into those that preferred or required LEAs to be the grantees, and those that preferred or required both LEAs and other public institutions; five more states expanded this criterion to include non-profit private institutions. Only nine states had changed their policies with regard to grantee type during the four-year period.

Over half of the states (28) indicated that they rejected the expenditure of funds for capital purposes, including equipment, generally on the grounds that such expenditures were legally prohibited. Six states rejected salary expenditures, and eighteen states did not cite any specific expenditure restriction. Again, few states (7) had changed their policy during the life of the program.

Twenty-four states indicated additional criteria: seven stressed plans for dissemination or "transportability" or replicability; six states indicated that the proposals were judged in terms of consonance with the state plan, guidelines, or other centrally based consideration. Four states required local contributions.

8. Objectives of Projects

SEA representatives were asked to indicate which objectives were involved in each of the projects that had been funded. By assigning the total dollar amount of a project to each of its objectives and then computing for each objective its percentage of the total years funding, one may arrive at an approximation of the relative importance assigned to each of the mandated objectives. It should be noted that this approach involves the assumption that each of a project's objectives is of approximately equal importance, the assumption that the various individuals who provided the data on project objectives utilized similar interpretations of what each objective encompassed, and the assumption that the informants were knowledgeable concerning the objectives of the projects. Since each of these assumptions is open to question, the findings, which are summarized in Table 81, below, must be viewed as indications of gross trends, rather than as definitive data.

TABLE 81

PERCENTAGE OF OBLIGATED FUNDS ATTRIBUTED TO OBJECTIVES

Objective*	Year I %	Year II %	Year III %
1. Occupational Familiarization	23	24	23
2. Work Experience	14	14	12
3. Guidance and Placement	13	12	13
4. Curriculum Improvement	25	26	25
5. Exchange of Personnel	7	7	6
6. Young Workers	4	4	4
7. Vocational Education Careers	7	8	9
8. Other	6	6	6

* See page 134 for list of objectives

Although the figures shown in the table suggest that the distribution of funds was extremely stable from year to year, examination of the data for the individual states reveals a highly varied picture. Some states show a decided shift in resource allocation, with some increasing in a category and others decreasing in that category. For example, Montana put 45% of its first year allocations into objective 1 (to familiarize students with occupations and requisites), and thereafter put 22% and 13% into this objective in the two subsequent years; New York, on the other hand, started out with 7% in this same objective and increased to 22% and 45% in the next two years. Further, there is also a wide range from state to state within each of the popular objectives, such as 1 and 4. For objective 1, the percentages range from 0% to 52% in Year 1 and from 4% to 85% in Year 3; for objective 4, the percentages range from 8% to 100% in Year 1 and from 10% to 62% in Year 3. The findings tend to indicate that many states shifted their priorities from year to year, either on the basis of an overall plan which encompassed several objectives in a sequential pattern, or as a result of funding decisions which were based on considerations other than those of proposed project objectives.

9. Program Operations

The relation between the SEA and the state-funded Part D(d) projects carried out by LEAs was reported to be quite extensive, as shown by the figures in Table 82. Almost all of the SEAs indicated that they monitor, provide technical assistance, disseminate project information, and provide services upon request. Almost all of the SEAs reported contact with the LEAs at least three times per year, and 40% indicated that the contacts occurred at least monthly. Since the responses to the questions on role and frequency of contact show little variability, there is clearly no relation between these data and other variables, such as grant purposes, or number of grants funded.

TABLE 82

ROLE OF SEA IN PART D(d) LEA PROJECTS

Role of SEA	Number of SEAs
Monitors projects	49
Provides technical assistance	47
Disseminates project information	48
Provides services upon request	49

FREQUENCY OF CONTACT BETWEEN SEA AND PART D(d) LEAs

Frequency of contact	Number of SEAs
At least monthly	20
Three or more per year	22
One or two per year	7
As needed	1

Four of the SEA interviewees indicated that in their opinion all of the state funded Part D projects were suitable for replication, and the remainder indicated that "some" projects were suitable. Thirty-six interviewees specified the particular projects which in their opinion contained activities that were suitable for replication. The total number of such projects cited was 144 (4 per interviewee). The total number of projects in these 36 states since the start of the program was 601, yielding the finding that 24% of the potentially replicable projects were specified as being replicable at least in part. (If the four interviewees who said that all of the projects in their

states were suitable for replication are included, the total number of projects which could have been cited was 682, and the percentage of those cited increases to 33%.) It should be noted that in several of these states the interviewees qualified their judgments by noting that they were not familiar with all of past, or in some cases, ongoing, projects. In the cases where the interviewee failed to specify projects suitable for replication, typically this was due to their expressed unfamiliarity with the details of project operations.

The interviewees reported a wide variety of activities related to dissemination of information and encouragement of replication. Some form of written communication, such as newsletters, guidelines, reports, or abstracts, was utilized by 19 states. Conferences, workshops, or oral reports were reported by 17 states, and the use of visits to demonstration centers or resource centers was reported by five states. Twenty-two states reported that they used more than one type of activity, and only four reported no activity. Eight states either provided direct funds for replication or were actively seeking legislation authorizing such funding.

10. Research Coordinating Units and Part D

In addition to collecting information on the state administered Part D funds, interviews were held with representatives of the Research Coordinating Units (RCU's) in 43 of the states visited. The RCUs receive Federal support through Part C of the Vocational Education Amendments of 1968. The purpose of the interviews was to collect information on the RCU's functions, roles and responsibilities in general, and more specifically, relative the the Part D program.

The most frequently cited RCU function was dissemintion of information to school officials throughout the state who were either operating career or vocational educational programs or were making plans to do so. This service, which was cited by 22 RCUs, consisted mostly of dissemination of descriptions of on-going projects in the state, and to a lesser extent, of research findings and curriculum guidelines and materials. The research and the curriculum information was generally derived from both the on-going work in the state and from information obtained through literature searches. The procedures followed in obtaining information and the methods used for dissemination were highly variable. The most frequently cited dissemination techniques were monthly newsletters, participation in planning conferences, and direct inputs to teacher workshops.

The second most frequently cited function of RCUs was the coordination of demonstration and/or research projects and the State Department of Education. This involved the transmission of information to various local and state officials. This type of coordination was cited as an important function by 20 of the RCUs.

Other frequently mentioned functions were conducting research (9), collecting and analyzing information useful for project planning or implementation (9), evaluating, reviewing, or monitoring projects (10), assisting in writing proposals or planning project strategies (11), and providing projects with technical assistance of various kinds (10).

The number of functions cited by the RCU's varied from one (information dissemination) to all of the above mentioned functions, and the size of the RCU staff varied accordingly. The state with only one function cited was staffed by two people, at 25% time each. The most active RCU had a director, coordinators for research, for planning, for evaluation, and for information services, and eight other professional staff members.

The distribution of functions with regard to Part D projects was very similar to those performed overall, except that the second most frequently cited function, after information dissemination, was that of providing technical assistance to the projects. Assisting in project planning was cited relatively infrequently. Only 27 RCUs reported any function in relation to the specific federally administered project visited by DA field staff.

D. Summary and Conclusions

An analysis of the preceeding findings was made in an effort to identify patterns or clusters of states which would permit inferring the general objectives and strategies of the Part D program. This effort did not produce meaningful results. For example:

- In comparing the categories reflecting percent of obligation with the one indicating use of SEA as grantee, one would expect to find a high percent of cases in which 100% was obligated. This is most certainly what one would expect in those cases where the SEA was the only grantee. The data do not bear this out, however. The two states that funded only the SEA obligated 86% and 65%, and only six of the 16 states that funded the SEA in addition to other grantees obligated 100% of their funds.

- A comparison of the project duration pattern with the percent of obligation also failed to produce a pattern. Of the 14 states that funded only 3-year projects in FY 70, all but two obligated over 96% their funds in that year, and all four of the states that funded only 1-year projects obligated at least 99% of their funds.

- The responses concerning project duration as a criterion in funding were scrutinized in relation to the practices followed with respect to the length of project funding, but no pattern was found. The states that indicated a preference for one-year projects (with no reported change in this preference), and those that indicated a preference for three-year projects, had very similar distributions in practice. Only one of the one-year preferred group funded its 1970 projects for only one year, and only two of the three-year-preferred groups continued to fund projects for three years. Of the 14 states that had funded three-year projects only, nine indicated that they did not use project duration as a criterion in funding.

- A comparison was made between the states which only funded projects for three years and those which only funded 1970 projects for one year, in terms of the proportion of funds spent on each of the eight project objectives. It was found that in two of the three "one-year-project" states for which data were available almost all of the funds were allocated to objective four, curriculum improvement, whereas in only two of the 14 "three-year" states were as much as 50% of the funds allocated to this objective. In contrast, the three-year states seemed to focus on objective one, familiarizing students with careers and requisites. Apparently, one-year projects tend to be planning and development projects, while three-year projects tend to be classroom implementation projects.

- Six states and the District of Columbia combined some or all of their Part D funds with those of the federal share project (Part D(c)). The states were Arkansas, Florida, Kansas, Mississippi, Nevada and New Jersey. In six of the seven cases, the exception being Nevada, the SEA was the grantee for the "federal share" project. In Mississippi and the District of Columbia all of the "state share" Part D funds were combined with the "federal share" funds. In the other five cases, the states funded other projects as well. In two cases, Mississippi and Nevada, the amount

delegated over three years was just under 80% of the state allocation, while in the other cases it was over 90%. In all seven cases the projects received "state share" funds for three years (the length of "federal share" projects), but the level of funding by year varied across the projects.

In conclusion, the various analyses have not produced clear patterns from which to infer any distinct set of strategies. Typically, states have granted Part D funds to local school districts or individual local [illegible]s. The principal objectives of the funded projects have been to familiarize students with occupations and to improve vocational education curricula, followed by work experience programs and guidance and placement activities. In any year, a typical state may be expected to make grants which vary widely in size and to projects which vary in duration from one to three years.

In general, the wide variability in funding approaches and the shifts from year to year suggest that the state departments of education in their funding of Part D exemplary projects are continuing to search for effective methods for implementing the new and innovative approaches called for by the federal legislation. It appears that the problem of identifying the most effective methods of achieving the objectives of Part D in local school districts has not been resolved.

CHAPTER XII: STUDY SUMMARY AND CONCLUSIONS

A. Introduction

With Part D of the 1968 amendments to the Vocational Education Act, Congress called for the funding of exemplary projects which would have as their ultimate goal the reduction of the rate of youth unemployment. Congress stated that this goal was to be accomplished by creating a "bridge between school and earning a living." More specifically, the legislation authorized the expenditure of funds for exemplary projects designed to broaden occupational aspirations and opportunities for youth.

The funds appropriated for the implementation of Part D were to be administered in part by the states and territories and in part by the U.S. Office of Education. Each state was allocated a portion of the Part D appropriation in accordance with a formula set forth in the legislation. During each of the first three years of the program, the amount of federally administered Part D funds allocated per state was in the range of $100,000 to $200,000 for most states; an equal amount was allocated to be administered by state government.

Operationally, federal responsibility for administration of the Part D program was vested in USOE's Division of Vocational and Technical Education (DVTE). Between June 1970 and July 1972, DVTE awarded a three-year grant to organizations in each state, territory, and the District of Columbia for the implementation of Part D projects. The grants made during this period were considered the "first round" effort of the Part D program. Since that time, additional grants have been awarded under a modified set of policy guidelines which are considered the "second round" projects. In Fiscal Year 1976, a new set of grants, with further modification of focus, is planned which will support a "third round" of projects.

This report represents an assessment of the federally administered first round projects and a descriptive overview of the state administered portion of the Part D program. The focus of the assessment has been on determining the extent to which the efforts undertaken during the first three years of operations achieved the intent of the enabling legislation. At the start of the study, measures were agreed on which would serve as indicators of the extent to which the program and its individual projects achieved student outcomes which the legislation and USOE policy statements indicated were expected. It was determined at the outset that it clearly would not be possible, and probably would be inappropriate, to attempt to assess the relationship between the program and the long term legislative goal of reducing youth unemployment.

Prior to summarizing the findings presented in the preceding chapters and drawing such conclusions as they permit, the positive program management actions which USOE has taken on the basis of this study's preliminary findings and other reviews of the experience should be noted. Specifically, concerted efforts have been made to be more specific with respect to the definition of key terms, and the student level outcomes expected. In addition, a major emphasis has been placed on improving the quality and practical utility of individual project evaluations. These USOE actions address the overall study finding that projects were typically not well defined in terms of purpose or clientele and that this lack of clarity may relate to the failure in many projects to identify student outcomes significantly related to project activities. Thus, the efforts at the national level during the last year to be more specific with respect to both program objectives and managerial practices represent explicit attempts to improve the program in the years ahead.

In large measure because of the explicit intent of the federal program managers to gain from the experience of the first round projects, the thrust of this study has been on obtaining information which would be of utility in planning for the future. Thus, while in one sense the study may be considered an evaluation of the performance of the program with respect to achieving the intent set forth in the enabling legislation, in another sense its intent has been to present findings with respect to several sets of program indicators which will assist both Part D and the newly created Office of Career Education in their efforts to maximize the positive impacts of their programs in the future.

B. Summary of Findings

The intent of the Part D program was to fund projects which would implement activities expected to assist students in obtaining satisfying employment. Chapter V of this report presented findings which related the amount of federal funds awarded to actual project expenditures. In essence, the grant awards may be considered as the planned federal fiscal inputs into each project, the local budgets as the projects' planned inputs, and expenditures as the actual inputs. A review of the year by year input data revealed that in most projects in no single year did the inputs occur at the level planned. Taking the three years in the aggregate and considering both expenditures and the legislative expectation that funds would be expended over a three-year time period, it was found that in 37 out of the 50 projects visited (74%) the federal dollars expended were below the level planned.

In part, the generally high level of project underexpenditures was attributed to the timing of the federal grant actions and the first year start-up requirements in many projects. As indicated in Chapter VII, another partial explanation for the underexpenditures may be related to the nature of the expenditure records maintained by project managers. Many project directors did not have expenditure data which permitted them to assess project status in even gross fiscal terms. In addition, in the great majority of cases they did not have information which related expenditures to any set of project activities.

From the findings on project activities presented in Chapter VI, it was apparent that on an annual basis, and across the three years of program operations, the extent to which projects carried out the activities specified in the USOE policy paper, * which governed the federally administered projects, varied considerably across the 50 projects. While most projects reported students in most of the USOE required activities at some point during the three years, relatively few (26%) reported having students in all activities.

The findings with respect to project activities may be explained partially by the data reported in Chapter VII pertaining to program management. A review of the stated objectives of the 50 projects revealed that in many cases the activities called for by the policy paper were not addressed; in no case did a project address an objective contained in the legislation but not in the policy paper. A comparison between stated objectives and related activity categories indicated that in many projects there was no relationship between stated objectives and the performance of activities which could be related to these objectives.

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* Policy Paper - AVL - V 70-1.

Given the findings regarding expenditures and activities, the findings with respect to student outcomes are not surprising. As reported in Chapter VIII, the greatest impact of the Part D program was at the elementary school level. In general, the program appeared to have had less impact on students at the 9th grade level; at the 12th grade level, impact was less than at the 9th for two sampling groups and greater for the other two.

On a project-by-project basis the impact of the program on students was small, with the bulk of favorable outcomes in each student group confined to a small group of projects. These "favorable" projects were somewhat different for each student group. Out of 45 projects where comparisons were made between participating and non-participating 6th graders on six relevant student outcome indicators, there was a difference in favor of participants for three or more indicators in ten projects; the most outstanding project at this level reported differences in favor of participants on five of the six indicators. Of the 42 projects where comparisons were possible at the 9th grade level, one project scored positively on six of the nine relevant indicators, and ten produced positive results with respect to three or more indicators. At the 12th grade level, nine indicators of student outcomes were relevant for each of the four strata sampled. Students whose participation in the program consisted of having teachers who utilized concepts and/or materials, made available through the local projects in their regular teaching program (i.e., infusion of career education concepts into the school curriculum), demonstrated a significant difference from non-participants on six indicators in one project; in five projects such differences were found on two or more indicators. In none of the projects where comparisons were possible for students in the Work Experience, Skill Training, or Guidance and Counseling groups was a significant difference between participants and non-participants found on more than three indicators.

While the search for relationships between the outcomes and selected project treatment indicators reported in Chapter XI did not provide a clear set of relationships between activity or treatment indicators and student outcomes, the review of responses of non-participating sixth grade teachers suggests that in at least some projects the inability to measure significant differences between participating and non-participating students may relate to non-participating teachers implementing career education concepts in their classrooms. Given the Part D program efforts at the state level described in Chapter XI and other federal, state, and university based efforts to stimulate the implementation of career education concepts in schools everywhere, this may well have been a contributing factor.

Another potential explanation is suggested by the relatively clear relationship which was found between project expenditures and student outcomes. As reported in Chapter X, with respect to elementary, junior high, and senior high familiarization activities positive indications of project effects on students occurred where relatively more project funds were expended on relatively fewer students.

In summary, the data presented in the earlier chapters showed that typically projects were found to have addressed four components with respect to the federal activity areas. Virtually all projects had some level of familiarization activities at both the elementary and junior high school levels. Projects generally devoted 26% of their Part D funds to pay for elementary school activities which involved approximately 2,000 students per project. The students participating in elementary activities usually amounted to less than half (46%) the total elementary school enrollment of the grantee and accounted for over half of the total number of project participants (52%).

Junior high school familiarization activities involved some 47% of the total junior high enrollment of the grantees and averaged 1,400 students per project. The activities at this level involved approximately 34% of the total number of project participants and cost 29% of the Part D funds.

Senior high school activities involved some 650 participants per project and represented approximately 35% of the total high school enrollment of the grantee. High school participants represented approximately 15% of the total number of Part D project participants and high school activities accounted for 44% of the total project costs. At the high school level, the typical project reported participants in familiarization activities and one other activity, either work experience or job entry skill training.

Classroom familiarization activities involved some 94% of all project participants in the average project. Almost always these activities were undertaken by classroom teachers on a voluntary basis. Generally, a coordinator hired by the project provided support to these teachers.

The typical project employed one coordinator for elementary level familiarization activities and one for secondary activities. Participating teachers usually received some in-service training in career education strategies and were frequently provided classroom support in the form of materials and curricula guides.

In some projects, counselors, trained and experienced in occupational guidance, provided training to teachers so that counseling of this type could be extended to the classroom. Another common variation in approach was for project staff to make regular visits to selected classrooms to conduct familiarization activities.

With respect to familiarization activities, it was found that the projects which scored highest on student outcome measures involved fewer participants at a higher cost than did other projects. More significantly, these highest scoring projects apparently devoted substantial time or resources to initial start-up activities. These activities included teacher training, planning, and curriculum development.

Work experience activities, where they occurred, involved an average of 110 students per year in the average project. Typically, work experience activities involved 1.3% of the average project's participants at 18% of the total Part D cost. The average project having work experience activities employed a work experience coordinator or a placement coordinator. Projects differed considerably with respect to the support provided work experience participants. Some projects coupled skill training and work experience for all participants. Counseling and guidance were also sometimes included. Other projects simply sought placement opportunities and provided released time from school. Although projects did not indicate that special entrance criteria were applied, analysis of student responses suggest that in general, participants in project supported work experience programs were less academically oriented than students in work experience programs not supported by Part D. This may account for the unfavorable results of these students on the outcome measures.

Skill training activities involved an average of 365 students per year in those projects where they were provided. Participants in skill training activities comprised an average of 2.9% of these projects' total enrollment and cost approximately 17% of the average total project Part D budget. Training usually was provided in traditional skill areas but was generally "intensified." Intensification usually meant that students were involved for more classroom periods per day over a shorter term than was typically the case. Again, analysis of student responses suggests that participants in this activity area were less academically oriented than other students tested; this may account for the unfavorable results of these students. It is also important to note that there was a significant decrease in the relative level of support provided for skill training activities and an increase in the relative support provided high school familiarization activities during the last year of the program. The relatively high cost of work experience and skill training activities may have been a factor in this third year shift in expenditures.

It is more likely, however, that the third year shift had little to do with the effectiveness of the activities or cost considerations, but resulted from other considerations. Specifically, the development of the concept of career education and widespread efforts emphasizing infusion of career education materials in recent years are probable factors. Given the emphasis on career education, it could be expected that a shift in priorities emphasizing familiarization activities might occur.

The typical project providing occupational guidance and counseling did so by including these activities as an integral part of some other treatment (e.g., work experience). Students participating in only counseling and guidance activities were analyzed in only four projects. While the student results presented suggest that this approach was not as effective as others in producing student outcomes, without considerably more experience and data such a conclusion is not considered to be warranted.

The USOE policy paper governing the first round projects required that grantees make provision for the continuation of project supported activities from "regular" funding sources after Part D support had terminated. In 14 of the projects visited, school personnel indicated that project activities either had or would terminate at the end of the grant period, and in 19 other cases they indicated that activities would be reduced. In eight of the projects, project activities either were continuing after the termination of the grant or definite plans existed for the continuation. In nine cases, activities had actually expanded after Part D funding had ceased.

C. Overall Conclusions

Well over half of the teachers and counselors surveyed in each of the 50 sites visited indicated that in their judgment it was important to include career education in the school curriculum. From this point of view, the first years of the program may be judged to have had a substantial effect. However, the findings presented above suggest that, in general, neither the federally sponsored activities nor the federally expected student level outcomes of the program occurred at the level planned. While a number of reasons for this are possible, the findings suggest that the most likely are associated with the general lack of a set of clearly defined objectives, definitions, and managerial requirements and procedures at both the project level and at the federal level. More specifically:

- The definition of key terms and concepts were neither precise nor consistent at either the federal or local levels. For example, students were identified as project participants because they were being taught by participating teachers, but what constituted teacher participation varied from attendance at a two-hour career education workshop to ten or more released days per semester for in-service training, curriculum development, and classroom planning. This failure to establish operational definitions and categories contributed to the inability of projects to identify with assurance participants in the programs and to the inability of the federal level to monitor project efforts effectively.

- Budgets and expenditure records typically were based on "line-item" rather than programmatic activity categories. Determination of activity costs was very difficult. This difficulty was primarily a result of the grant application and award process which did not specify costs by activity; only in the aggregate. This was further complicated by no provision for administrative costs, which meant that most projects attempted to prorate such costs and attribute them to treatment activities. It is probable

that this contributed to the failure of project directors to analyze expenditure data and of project staff to use budget and expenditure data in the management of projects. In addition, it is probable that this contributed both to underexpenditures and the failure to engage in expected activities.

- Similarly, USOE did not use fiscal data as management indicators. Typically, the federal management staff did not receive or analyze expenditure data. This contributed to the underexpenditure of funds annually and the support of some projects for periods in excess of the three-year funding limit stipulated in the legislation.

- The evidence strongly indicates that exemplary programs require considerable start-up activity and time. Failure to adequately anticipate this appears to have resulted in the inability of projects to meet program expectations.

- Generally, participants in the projects were exposed more to visitors in their classrooms who discussed careers, and went on more field trips to learn about jobs, than non-participants. The data suggest that this quantitative difference in the number of such experiences was not sufficient to produce a measurable impact on students. Rather, it appears that such activities need to be integrated into a well-planned and comprehensive effort.

- The number of different approaches to building a bridge between school and earning a living undertaken by the first round projects was limited. Fewer than half of the projects had work experience or skill training activities. Many of the new approaches suggested in the legislation and Federal Register, such as exchanges of personnel between schools and agencies or businesses, were not attempted during the first round. Projects generally did little to promote cooperation between public education and manpower agencies.

- The primary focus of round one was elementary and secondary familiarization and orientation. Most of the total funds and most of the student participants were engaged in such activities. Work experience and skill training efforts tended to be expensive and involve limited numbers of students. Where other activities were initiated, such as alternative high schools, they tended to be less integrated into the school system, expensive, and by design, served fewer students (i.e., potential dropouts or others with special needs).

- To assist college and non-college bound students in obtaining employment, the USOE policy paper indicated that projects should provide specific training in job entry skills to students not previously enrolled in vocational programs just prior to the time that they leave school. The data appear to indicate that most projects extended such training only to the non-college bound.

- The projects typically did not assist students in securing employment, either during school or upon graduation. Generally, the placement activities implemented were essentially referral services and little or no followup was provided. In general, neither project staff nor school personnel maintained records of referrals or placement activities.

- The student responses indicate that guidance and counseling at the high school level was viewed by students as helpful to them. The data also indicate that a great many students did not feel they had sufficient opportunity to receive assistance from their counselors and they would have liked to have increased their contacts.

The Federal Register indicated that applications for round one projects would be judged in part upon the projects' objectives being "sharply defined, clearly stated, capable of being attained by the proposed procedures, and capable of being measured." During the first years of Part D, neither at the federal level nor in most school districts was this the case. The inability to clearly define federal program objectives undoubtedly contributed to many of the difficulties discussed in this study. Without a specified set of federal expectations the individual third party evaluations could only relate to local project goals and objectives. This resulted in a large diversity of evaluation approaches. It is not surprising, therefore, that these evaluations did not provide meaningful or useful management information at the federal level for comparing projects. Without specific criteria for judging project progress, the USOE really had no basis for making annual or mid-project grant modifications. Most importantly, without such predetermined criteria, the USOE had little indication of what criteria would be employed in the final evaluation and so were not able to effectively manage for success.

A final point in this regard relates to the whole area of the management of educational projects. While this was not a management practices study, many of the findings and conclusions appear to relate directly to management issues. The points raised above pertaining to advanced planning, the clarity of program and project objectives, and the use of fiscal data are management questions which relate to attainment of student level outcomes. So too, we suspect, are the points made in the text pertaining to the inappropriateness of the job descriptions of project staff, failure to maintain records pertaining to placement and other project activities, and the limited focus and use of third party evaluations. Based on our observations, project staff typically were sincere, hard working, and oriented toward the substantive aspects of the program. Typically, however, they were not well versed in the use of sound management practices as an aid in bringing about desired innovations in their school districts. Thus, based on the experience of the first round projects studied, it appears that a USOE focus on providing guidance and assistance in the area of project management would have been of major benefit to the successful implementation of exemplary programs.

Such conclusions as these are not uncommon in national studies. While they are accurate, they are also somewhat misleading, for they cannot and do not cover the pre-program context of the system of federal funding. Legislative intent is frequently less than clear, the time constraints do not usually permit careful planning at the federal level prior to funding of local projects; the federal agencies are frequently not sufficiently staffed to permit effective management and, when they are, the very question of the desirability of effective federal management of local educational programs becomes a question. Thus, as long as inherent weaknesses such as these persist, evaluation findings will essentially tend to be either negative or ambiguous and recommendations will be symptomatic instead of definitive.

In conclusion, the USOE and especially the program staff in DVTE, who have from the outset not only cooperated with this study but also have taken actions based on preliminary findings, should be commended. It is rare for a national program with innovative and ambitious objectives to engage in a comprehensive, impact oriented evaluation after only three years of operation. While some of the findings of the study may not be what one might have wished, given the complexities inherent in implementing the Part D program during its initial years, they ought not to be surprising. In our judgment, perhaps the most significant aspect of the study is the

inference which may be drawn from the fact that it was done, and that actions have been taken as a result. Clearly, USOE, and the staff of DVTE in particular, have evidenced a commitment to improving both the content and the management of federal education programs.

APPENDIX A: PUBLIC LAW 90-576

APPENDIX B: POLICY STATEMENT

"PART D -- EXEMPLARY PROGRAMS AND PROJECTS

"Findings and Purpose

"Sec. 141. The Congress finds that it is necessary to reduce the continuing seriously high level of youth unemployment by developing means for giving the same kind of attention as is now given to the college preparation needs of those young persons who go on to college, to the job preparation needs of the two out of three young persons who end their education at or before completion of the secondary level, too many of whom face long and bitter months of job hunting or marginal work after leaving school. The purposes of this part, therefore, are to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for young people, who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies.

"Authorization of Grants and Contracts

"Sec. 142. (a) There are hereby authorized to be appropriated $15,000,000 for the fiscal year ending June 30, 1969, $57,500,000 for the fiscal year ending June 30, 1970, and $75,000,000 for each of the two succeeding fiscal years to enable the Commissioner to carry out the provisions of this part.

"(b) (1) From the sums appropriated pursuant to this part the Commissioner shall reserve such amount, but not in excess of 3 per centum thereof, as he may determine and shall allot such amount among Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territories of the Pacific Islands according to their respective needs for assistance under this part.

"(2) From the remainder of such sums the Commissioner shall allocate $200,000 to each State (except for those provided for in paragraph (1), and he shall in addition allocate to each such State an amount which bears the same ratio to any residue of such remainder as the population aged fifteen to nineteen, both inclusive, in the State bears to the population of such ages in all such States.

"(c) From 50 per centum of the sums allotted to each State for the purposes of this part, the Commissioner is authorized to make grants to or contracts with State boards or local educational agencies for the purpose of stimulating and assisting in the development, establishment, and operation of programs or projects designed to carry out the purposes of this part. The Commissioner also may make, in such State from such sums, grants to other public or nonprofit private agencies, organizations, or institutions, or contracts with public or private agencies, organizations, or institutions, when such grants or contracts will make an especially significant contribution to attaining the objectives of this part.

"(d) The State board may use the remaining 50 per centum of such sums for making grants to local educational agencies or other public or nonprofit private agencies, organizations, or institutions, or contracts with public or private agencies, organizations, or institutions including business and industrial concerns, upon such terms and conditions consistent with the provisions of this part and with its State plan approved pursuant to section 123, as it determines will most effectively carry out the development, establishment, and operation of exemplary and innovative occupational education programs or projects designed to serve as models for use in vocational education programs.

"Uses of Funds

"Sec. 143. (a) Grants or contracts pursuant to this part may be made, upon terms and conditions consistent with the provisions of this part, to pay all or part of the cost of --

"(1) planning and developing exemplary programs or projects such as those described in paragraph (2), or

"(2) establishing, operating, or evaluating exemplary programs or projects designed to carry out the purposes set forth in section 141, and to broaden occupational aspirations and opportunities for youths, with special emphasis given to youths who have academic, socioeconomic, or other handicaps, which programs or projects may, among others, include --

"(A) those designed to familiarize elementary and secondary school students with the broad range of occupations for which special skills are required and the requisites for careers in such occupations;

"(B) programs or projects for students providing educational experiences through work during the school year or in the summer;

"(C) programs or projects for intensive occupational guidance and counseling during the last years of school and for initial job placement;

"(D) programs or projects designed to broaden or improve vocational education curriculums;

"(E) exchanges of personnel between schools and other agencies, institutions, or organizations participating in activities to achieve the purposes of this part, including manpower agencies and industry;

"(F) programs or projects for young workers released from their jobs on a part-time basis for the purpose of increasing their educational attainment; and

"(G) programs or projects at the secondary level to motivate and provide preprofessional preparation for potential teachers for vocational education.

"(b) (1) A grant or contract pursuant to this part may be made only if the Commissioner is in the case of grants or contracts made by him, or the State board, in the case of grants or contracts made by it, determines --

"(A) that effective procedures will be adopted by grantees and contractors to coordinate the development and operation of other programs and projects carried out under grants or contracts pursuant to this part, with the appropriate State plan, and with other public and private programs having the same or similar purposes;

"(B) that to the extent consistent with the number of students enrolled in nonprofit private schools in the area to be served whose educational needs are of the type which the program or project involved is to meet, provision has been made for the participation of such students; and

"(C) that effective policies and procedures will be adopted which assure that Federal funds made available under this part will not be commingled with State or local funds.

"(2) The amount available to a State pursuant to section 142(d) shall be available for obligation for grants or contracts pursuant to the State plan approved under section 123, for paying all of the cost of programs described in section 142(d) and section 143(a) during that year and the succeeding fiscal year.

"(3) No grant or contract (other than a grant or contract with a State board) shall be made by the Commissioner under section 142(c) with respect to any program or project unless such program or project has been submitted to the State board in the State in which it is to be conducted and has not been disapproved by the State board within sixty days of such submission or within such longer period of time as the Commissioner may determine pursuant to regulations.

"(4) Notwithstanding any other provision of law, unless hereafter enacted expressly in limitation of the provisions of this paragraph, funds available to Commissioner pursuant to section 142(c) shall remain available until expended.

"Payments

"Sec. 144. From the amount available for grants and contracts, under this part pursuant to section 142(c), in the appropriate State, the Commissioner shall pay to each applicant an amount equal to the amount expended by such applicant in accordance with the approved application. Such payment may be made on such terms as are approved in such application. Payment pursuant to grants under this part may be made in installments, and in advance or by way of reimbursement, with necessary adjustments on account of overpayments or underpayments, as the Commissioner may determine.

"Limitation on Duration of Assistance

"Sec. 145. Financial assistance may not be given under this part to any program or project for a period exceeding three years.

COPY

APPENDIX B: POLICY STATEMENT

Department of Health, Education, and Welfare
Office of Education
Bureau of Adult, Vocational, and Library Programs

POLICY PAPER -- AVL V70-1 October 2, 1969

SENT BY: Grant Venn, Associate Commissioner,
Bureau of Adult, Vocational, and Library Programs

SENT TO: Executive Officers of StateBoards for Vocational Education
State Directors of Vocational Education

SUBJECT: Highlights of provisions for Exemplary Programs and Projects in Vocational Education

INTRODUCTION: The Division of Vocational and Technical Education of the Bureau of Adult, Vocational, and Library Programs administers the exemplary programs and projects under the Vocational Education Act of 1963, as amended by the Vocational Education Amendments of 1968 (Public Law 90-576). Direct financial support is furnished for programs and projects by the U.S. Commissioner of Education under Section 142(c) of Part D of the Act.

Exemplary programs and projects are to be designed to: (a) create bridges between school and earning a living for young people who are still in school, who have left school either by graduation or by dropping out, or who are in post-secondary programs of vocational preparation; (b) promote cooperation between public education and manpower agencies; and (c) broaden occupational aspirations and opportunities for youths, with special emphasis given to youths who have academic, socioeconomic, or other handicaps. Provision is to be made for the participation of students enrolled in private non-profit schools. The projects are to be conducted under grants or contracts awarded by the Commissioner, in accordance with the provisions of Part D of the Act and with the applicable Federal Regulations. Eligible applicants may include local educational agencies, State Boards for Vocational Education, and public and private agencies, institutions, or organizations.

NATURE OF PROJECTS: Exemplary projects represent bridge-building efforts between research and development work on the one hand and actual operations in school settings on the other hand. Exemplary projects will not involve original research and developmental activities but will be based upon prior research and development. They will be limited to what research has already shown will work. Therefore, exemplary projects should have a high probability of success. They should constitute a transition of research findings and developmental efforts to program operations.

FOCUS FOR FISCAL YEAR 1970: In order to achieve maximum impact, the funds available for fiscal year 1970 will be focused on programs or projects which combine, in one operational setting, all the following aspects:

1. Provision for broad occupational orientation at the elementary and secondary school levels so as to increase student awareness of the range of options open to them in the world of work.

2. Provision for work experience, cooperative education, and similar programs, making possible a wide variety of offerings in many occupational areas.

3. Provision for students not previously enrolled in vocational programs to receive specific training in job entry skills just prior to the time that they leave the school. (Some of these training programs might be very intensive and of short duration.)

4. Provision for intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling. (Placement might be in a job or in post-secondary occupational training. Placement should be accomplished in cooperation with appropriate employment services, manpower agencies, etc.)

5. Provision for the grantee or contractor to carry the program on with support from regular funding sources after the termination of the Federal assistance under Part D of P.L. 90-576. (Federal assistance under Part D cannot exceed three years.)

It is anticipated that other program emphases may be highlighted in future fiscal years.

FINANCIAL CONSIDERATIONS: Direct grants and/or contracts will be awarded in each State up to the limit of funding available for the Commissioner's use in that State as allotted under Part D of P.L. 90-576. For fiscal year 1970, it is anticipated that the amount available for the Commissioner's use for grants or contracts in each State will range from $100,000 to $200,000. Since exemplary projects will usually require substantial financial resources, consideration should be given to incorporating funds from a variety of sources, such as transfer funds under Part B, Cooperative Vocational Education funds under Part G, Work Study funds under Part H, and funds from State and local sources. Funds allotted to the States for exemplary programs under a State plan may be combined with the Commissioner's grant or contract funds into a single Part D project. Generally, proposals which feature a skillful combining of several types of funding, structured around the central framework of a Part D grant, will be viewed with special favor.

APPLICATION PROCEDURES: During fiscal year 1970 the cutoff date for receipt of proposals will be January 1, 1970. Proposals must be prepared and submitted in accordance with the publication entitled, Manual: Instructions and Procedures -- Exemplary Programs and Projects in Vocational Education* Persons preparing proposals should consult with representatives of their State Board for Vocational Education regarding sources of supplementary funding and coordination with other vocational education programs and activities in the State. Completed proposals are to be submitted to the U.S. Office of Education, with copies furnished simultaneously to the applicable State Board for Vocational Education. The State Board will review each proposal and may, within a period of sixty days, disapprove any proposal. All proposals not disapproved by the State Boards will be reviewed by the U.S. Office of Education, on the basis of analysis by specially-constituted review boards composed mainly of knowledgeable practitioners. The review will take into consideration such factors, among others, as: (1) the potential of the proposal for contributing significantly to the accomplishment of the purpose of Part D of P.L. 90-576; (2) the soundness of the proposed plan of operation; (3) the adequacy of the personnel and facilities available for carrying out the proposal; and (4) the proposal's economic efficiency. State Boards and applicants will be notified of the approval or disapproval of each proposal, and grants or contracts will be negotiated with those applicants whose proposals are approved.

* Copies of the publication may be obtained by writing to: Division of Vocational and Technical Education, U.S. Office of Education, Washington, D.C. 20202.

NOTE: The above is based upon the assumption that funds will be appropriated by the Congress to activate this program during fiscal year 1970.

cc:
Regional Assistant Commissioners
Regional Directors of AVLP